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## LABOR

### REPUBLIC COUNCIL CONDUCTS SURVEY ON BRIGADE LABOR METHOD

Minsk PROMYSHLENNOST' BELORUSSII in Russian No 8, Aug 82 pp 33-37

[Article by V. Sokolovskiy and Yu. Lapshin: "The Reserves of the Contract"]

[Text] In the pages of our journal we have frequently dealt with the brigade labor organization, including the publication of articles from the Borisovskiy Avtogidrosilitel' [[Automobile Hydraulic Booster] Plant and the Plant for Motor and Tractor Electrical Equipment, the Brest Plant for Gas Equipment, and other enterprises of the republic. They also dealt with existing shortcomings.

Today we are returning to this important subject. In the selection published below the data from a survey questionnaire were utilized, which was conducted by the republic Scientific Council for Competition, as well as materials of a republic seminar and conference on the exchange of experience concerning the introduction of the brigade form of labor organization and incentive.

N. Nikolayenko, chairman of the council of brigade members of the Belorusrezinotekhnika [Belorussian Industrial Rubber Products Plant] Production Association imeni 60-letiya Velikogo Oktyabrya:

Brigades have been created. What has changed? Some say the following: "We have come closer to one another. The negligent [workers] are being subjected to strict demands. Now there are fewer of them. That means that the target comes easier." Others say: "But in our work there are no special changes. As before, there are work stoppages because of interruptions in the supply of raw material. We believe that, if the brigade bears full responsibility for the execution of the plan, then let the administration, in its turn, too, bear the same responsibility for the creation of the necessary conditions for it."

Let us turn, however, to practice. One of the brigades in our enterprise is headed by the machinist of the tread-extruding unit of the tire-repair shop, deputy of the rayon soviet, the communist Aleksandr Aleksandrovich Lynsha. It is carrying out the production program with the smallest number of workers. The shift output is up to one and a half times the norm. It has decided to fulfill the target of the current five-year-plan in 3.5 years. Almost all of



the members of the brigade have associated professions, all have a secondary education and are studying in the school of communist labor.

Briefly about my brigade. Eight out of ten people can replace any member of the brigade. We are fulfilling the targets to the extent of 120 percent. For a long time we have not had violations of labor and technical discipline. Any matter is carried out with care.

The activity of the brigades is regulated by a special statute. The part entitled "The Organization of the Administration of Brigades" states that a brigade member is appointed by order to the plant on presentation of the chief of the department, but this is done after discussion of the candidate in the brigade. The council of the brigade is elected in an open vote at the workers' meeting. Its composition includes without fail the organizer of the trade union group. The foreman [master] is obliged to take an active part in the work of the council. In addition to everything, the council determines the candidacy on the basis of moral and material interests in terms of intra-plant competition. Its decisions are effective only after confirmation at the general meeting of the brigade members.

The coefficient of labor participation is not only the level of labor productivity and the quality of work, but also the combination of professions, the execution of more difficult operations, the increase of the zone of service, the application of innovational methods in work, high labor discipline, social activeness (participation in socialist competition, tutorship, work in efficiency expertise) etc. The unit is taken as the base coefficient. In the distribution of additional payments the KTU [coefficient of labor participation] may vacillate between 0 and 2.

The economic basis of the brigade organization of labor is payment according to the final product. The question is exceedingly punctilious. And this is why: The brigade includes not only front-rank workers, but also inexperienced young people. There are instances of violators of labor discipline who still have to be educated and educated. Here wage-leveling is a bad help. In my view, the coefficient of labor participation is a necessary element of the payment of labor.

In our association there are 125 integrated brigades, including 9 from-start-to-finish brigades, and 210 specialized brigades. Specialized brigades have also been created for the repair of technical electrical equipment and KIPiA [control and measuring instruments and automation equipment] (payment is made according to completed repair with regard to the fulfillment of the schedule). By the way, on brigades of auxiliary production. In due course a brigade was created for the centralized repair of electrical equipment (brigade leader: Mikhail Mikhaylovich Vinokur). Since that time all work operations are carried out with a smaller number of workers, and, moreover, better than before: There has been a significant increase in the length of the period between repairs. The same thing can be said about the department of ASUP [Automatic Enterprise Control System], where the operators work on single order. Here the labor of two people is saved. An integrated brigade for the formalization of shipping documents and the conducting of the calculation of the output and shipment of

finished production succeeded in reducing the time for the processing of the documents and transmitting them from the warehouse for finished products to Gosbank, which previously was out of the question.

Unfortunately, only 55 percent of the workers are encompassed by the brigade form of labor. There are also other facts which inspire serious reflection. I will cite the following example. In Shop No 7 the vulcanizers of relin [a type of linoleum made of rubber] have worked for many years as a brigade. And suddenly they are transferred to individual piece-work, although some operations (the preparation of the layers, the handling of the bobbins, and the removal of the relin) even now they carry out together. Such a solution is not in the interest of the matter.

Today only 44 brigades out of 336 are using the coefficient of labor participation. What is the matter? In our association there are quite a few occupations such as, let us say, press operators of moulded industrial rubber products where, before brigades can be created, it is necessary to bring about a radical improvement in the working conditions. True, there are some rough outlines on this account (the organization of labor by positions), but a final decision on this question has not been taken.

There is another problem that is connected with the coefficient of labor participation: A part of the workers do not want to spoil their relations with the loafers, although they know that they will pull the brigade back. They have become used to the fact that someone else, the foreman, let us say, must fight with the loafers. In such conditions painstaking explanatory and educational work is needed. But it is not always conducted on the requisite level.

In a word, prior to doing something, one must weigh everything nicely, and not the other way around. As experience shows, the matter is worth it.

V. Skripka, chairman of the plant committee of the trade union of the Minsk Mechanical Plant imeni S. I. Vavilov:

Five years ago we began to occupy ourselves with the creation of brigades working on a single order. At that time there was no other way out for us. With the organization of labor that had existed the utilization of the capacities of the machine shops and blanking shops could be secured only to the extent of 80 percent. In the conditions of mixed production, when during a year articles of 200 products lists are produced, when every month components of 40,000 designations are manufactured, individual piece-work became an impediment--neither to control, nor to organize competition. . .

A commission was created, consisting of engineers, economists, representatives of party, trade union and other mass organizations, and the best workers. The members of the commission stayed at the Kaluzhskiy Turbine Plant and acquainted themselves with the experience of the transition to the new system of labor organization at other enterprises. They worked out the appropriate recommendations and established the procedure and sequence of the introduction of the brigade method of work with payment according to a single order.

Now there are 673 brigades at the enterprise, bringing together 60 percent of the total number of workers. In some shops more than 90 percent of the workers are working on single order. In one of these subdivisions, production output during the past three years increased by 18 percent with a reduction in the number of workers, cadre turnover was reduced to 2 percent, and violations of labor discipline were practically eliminated.

Effective is the organized review-contest which, in summing up the results, takes into account the rhythm of the fulfillment of the production program, the realization of the targets according to the products list, the reduction of labor intensiveness, the introduction of technically substantiated norms, as well as the mastery of related vocations, the economy of raw material and materials, tutorship, etc. The shops which are victorious are awarded prizes.

The structure of the trade union organization was changed. During the past two years 68 new trade union groups were created in the brigades. The program of the school for the trade union aktiv was reviewed. Seminars for trade union group organizers are held on a regular basis. Some posters have been published which tell about the experience of the best brigades. The practice of the organization of socialist competition has also been reviewed. Every month the best brigades are determined: Six from the machine shops, three from the assembly shops, and one for the auxiliary shops. The best brigade is awarded a challenge red pennant, an appropriate certificate and a cash award. In terms of the results for the year, brigades are recognized as winners which have been prize-winners no less than four times in terms of the monthly results. They are awarded pennants, certificates, and cash awards; in terms of the five-year-plan--certificates, cash awards, and pennants to keep forever (to brigades that have been victorious no less than three years).

Now--on sociological research on the economic and social effectiveness of the brigade form of labor organization. More than half of those surveyed noted that with the creation of brigades there was an increase in labor productivity and the responsibility for its results, that there was an increase in the cohesiveness of the collectives. Eighty-two percent of those surveyed asserted that the procedure of the distribution of wages according to the coefficient of labor participation satisfies them. Two thirds have mastered related vocations (five times more than under the individual piece-work system). More than three fourths production workers take part in various forms of the administration of production.

I will remind you that on the basis of the results of the 10th Five-Year-Plan the plant was awarded the Order of the Red Banner of Labor. To a large extent, the progressive forms of labor organization, including the brigade [form], contributed to this success. Now, too, the collective is working with confidence. There are quite a few followers in the brigade of the melters of Vyacheslav Leonovich Tomashevich, who has assumed the obligation of completing the five-year-plan half a year ahead of schedule, as well as in the brigade of the metal workers of Al'bert Zolevich Kuksa (the five-year-plan--by the 115th anniversary of Lenin's birth). The word gains eloquence from deeds. By November 7 95 percent of the brigades had covered the program for the year 1981. Among them is the Komsomol youth brigade of metal workers, headed by Tamara Ignat'evna Yakimovich (the brigade was awarded the challenge Red Banner of the Central Committee of the Komsomol).



In the conditions of the brigade form, the movement "In every trade union group --not a single [worker] lagging behind, not a single violator of labor discipline and the public order" has acquired special significance.

We also have problems. Given the shortage of production areas, it is difficult to create sectors with a secluded cycle of production, and that means, integrated brigades. Cost accounting is being slowly introduced in the brigades. This has to do with the instability of securing certain work operations to brigades, with the absence of complete sets of brigades.

A. Petsko, brigade leader of the integrated brigade of press-tool operators of the Belemal'posuda [Belorussian Plant for Porcelain Plates and Dishes] Production Association (Gomel'):

From the moment of its creation our brigade almost fully renewed itself--people transferred to newly created brigades with the aim of strengthening them. Now there are 36 people in it. Three links have been established--press-tool operators, welders and expanders, and etchers. The team leaders are the best workers: Mariya Il'ichna Zaytseva, Lyubov' Vasil'evna Shilenkova, and Mariya Aleksandrovna Chikizova. In the press sector there are three such brigades. All of them work on a single order.

All arrive for their shift a little bit earlier than the regulations call for: The work place must be prepared, people have to be shifted (if someone is ill or if the task has changed unexpectedly), etc. Together with the foreman and the team leaders, I acquaint everyone with the task of the shift.

After the shift there is the summing up of the results. All workers take an active part in their discussion, here concrete proposals are offered and measures are outlined for their practical realization.

The obligations and rights of foremen, brigade leaders, and team leaders are regulated by a special statute. The main thing is not to duplicate, not to interfere with one another, but to help. Behind the foreman is the general leadership of the brigade, the sector, and the shop. In carrying out [my] basic work, I represent the interests of the brigade in the shop committee of the trade union, in the shop and plant councils of brigade leaders. In our plant we manage in the following way: The foreman takes into consideration the opinion of the brigade leader in all concrete production questions, and the brigade leader, in his turn, the desires of the team leader.

The team leaders and brigade leaders enter special notes in a journal on a daily basis, so as to determine the coefficient of labor participation at the end of the month in a completely objective way. Collectively we note those who have distinguished themselves during the shift, and we keep our eyes open for miscalculations.

In the council of the brigade are the brigade leader, the team leaders, and the best workers. By statute we meet once a month, if necessary we have a special meeting. We discuss the state of labor and technical discipline, questions of the quality of work, we sum up the results of competition, etc. Not long ago we had to investigate an extraordinary incident. The expander Yevgeniy Ye. committed truancy. We never had such a thing before.

The council of the brigade works according to the plan. What does it envisage? Let us say, it is decided to attain the equipment of the expanding machine tools with special cylinders with conduct of compressed air. This improvement of the brigade worker L. Ivanchikov has quite a few advantages: It frees one hand of the expander for an additional operation, it eliminates the forceful pressure by hand, and that means it increases labor productivity and lowers fatiguability. In the plan of the plant council of brigade leaders, it goes without saying, the points are different. For example: To study the experience of the integrated brigade No 5 of the second shop in order to develop recommendations for improving the work of the other brigades.

We have also developed our workers' dynasty--the married couple Leonid Nikolaevich and Nina Parfenovna Ivanchikov, and Nina's brother--Aleksey Parfenovich Ageyenko. All three constitute an example of model labor. Team leader Lybov' Vasil'yevna Shilenkova not long ago was an apprentice. Now she has her subordinates. She has mastered three related specialties. And another interesting fact. Earlier we had a person who during the entire work day repaired plates and dishes with dents. The workers proposed: We will see to it ourselves that the rough products come out without defects. Link No 1 decided to produce high-quality products for 7,000 rubles above the annual target, to reduce losses from waste by 20 percent, and to lower the losses of labor time by 10 percent. We are participating in competition under the slogan: "To the 60th Anniversary of the Formation of the USSR--60 Shock Weeks". We are constantly overfulfilling the targets.

M. Matashkova, chairman of the council of brigade leaders of the Vitebskoye Monolit [Monolith] Production Association:

Do we not too often talk about the difficulties in the organization of socialist competition, especially individual competition, in the conditions of the brigade? In my opinion, such an approach is unsound. If the individual, as V. I. Lenin emphasized, is not a "screw" [vintik], but the master in production and takes part in the decision of all current affairs, then such an individual will always have a highly serious attitude towards competition. That means that the crux of the problem is to create for him the necessary conditions for this.

In introducing the brigade organization of labor, we proposed to give competition a new impulse. The brigade and collective spirit is a powerful stimulus to competition. The effect surpassed all our expectations. Not holding back I will say: Competition has received new wings, a second breath. How, for example, were the circumstances accepted previously? In a formal way! The foreman and the trade union group organizer persuaded the worker: "Write, time is pressing." Then, having worked out the obligations of the sector, they hurriedly accepted them, usually at the end of the shift. But now? During the working out of the obligations there is discussion and there are even debates. Even the formerly taciturn give speeches.

With the introduction of the brigade system, the workers exert a direct influence on production life through the councils of the brigades and brigade leaders. As far as the obligations of the brigade are concerned, they sum up the individual ones to a certain degree. For example, labor productivity is determined by the individual plans.



The results of socialist competition are summed up every month in accordance with a special method. The basic indicators are--plan fulfillment, rhythm, specification, products list, labor productivity, wage fund, technical losses, production efficiency, and the observance of labor and technical discipline. In addition, the delivery of production to the division of technical control from the first presentation and the observance of safety engineering are taken into account. If there are output norms in the brigade which are not being fulfilled, then such a brigade cannot claim a prize-winning place. For every indicator a coefficient is calculated. On the basis of the sums of the coefficients both the front-rank workers and those who are lagging behind are determined.

The summing up of the results of competition is done at joint meetings of the committees of the trade unions and the administration, to which workers, foremen, brigade leaders and trade union activists are invited. The publicity of competition has improved. Now everyone is informed not only about the affairs of the brigade, but also about the work of their neighbors in the technological chain. The following fact. During the past year, our brigade of final operations 9 times occupied first place in the shop. And here at a regular meeting of the brigade leaders the question arose: Why do brigades working on automatic transfer lines never come out as leaders? They began to try to understand this together. It turned out that for us and for them the indicator "output of product-yield" was identical, but the conditions for its achievement were different. The council of brigade leaders took the decision: To temporarily differentiate this indicator.

One more example. Previously the machine-tool operators and the adjusters competed individually. Everyone only "hurt" for the equipment allotted to him. This prevented the exchange of experience. Now all of them are united in one brigade. And here is the result. During the second six months of 1981 alone, the coefficient of the utilization of capacities increased from 1.17 to 1.28, the quality of production improved, and the "output of product yield" increased. By virtue of this their productivity increased by 9.2 percent.

Individual competition in conditions of the brigade is conducted:

- for the increase of labor productivity and the quality of production;
- for the right to work by warrant of the division of technical control;
- for the expansion of the zone of service;
- under the slogan: "To every machine--a passport of efficiency";
- for the title "The best worker in the profession".

What would we like to improve in the matter of the organization of competition? In our production association every brigade performs 7-9 technical operations each out of 60. That is, it must have personal "suppliers" and "consumers". How can this be attained? We need mutual contracts and obligations. And they must be confirmed at joint meetings of the interdependent collectives.

V. Man'kova, trade union group organizer of the brigade of the Gremanskiy Flak Combine:

The collective of the spinning mill No 1 was one of the first to introduce the brigade form of labor organization and payment. Since 1 June 1981 we are working according to the new system. In the brigade there are 51 people with different specialties. We operate PS-100-LO spinning machines.

At first we, the trade union group organizers, frequently had to turn to the management of the shop and to public organizations for advice. You know, at that time we could not even intelligently explain the subtleties of the new enterprise. They met us halfway. Questions of the staffing of the brigades, planning, norm setting, and the organization of socialist competition were decided in a complex.

Now the center of all organizational and educational work has been transferred to the trade union group. The obligations being assumed, as a rule, are corroborated by economic calculations, as well as measures with respect to new techniques and equipment, the mechanization of manual labor and the creation of the appropriate working conditions, the increase of the qualifications of the members of the brigade and the mastery of related vocations. The meetings in the trade union group dealing with the defense of individual obligations are held in a business-like manner. Our brigade is headed by engineer S. Kostyukova. We sum up the results of labor competition on the basis of individual calculations of efficiency.

Intra-brigade competition is supported by mutual gain. A lot of help in the formation of young workers is provided by V. Apechenok, L. Barkovskaya, and T. Kravtsova. Many of them can already replace each other. The initiative of the Rostov workers--to work without laggards--has also found wide dissemination. Now we actually do not have workers who lag behind: Everyone thinks not only about himself and about his affairs, but also about the affairs of his comrades, indeed the fulfillment of the plan and the wages depend on the total result.

The new form of the organization and payment of labor have fundamentally changed the attitude of the members of the trade union group towards the economy of raw material and there has been a significant decrease in the output of waste. Seven times our brigade has been victorious in the competition based on individual calculations of efficiency. In two quarters it was noted as "The Best Brigade". During the period of work according to the new system, 4,945 rubles have been saved.

G. Tokmakov, head of the labor and wages department of the Minsk Production Association for Broaching and Cutting-Off Machines imeni S. M. Kirov:

Of special importance today is objectivity in the distribution of wages. Judge for yourself. The norm setting of a part of the work operations is done on an electronic computer. During a year there more than 700,000 norms. Moreover, a significant part of them are of single use. That means there are "advantageous" and "disadvantageous" work operations. In brigades such a thing is inadmissible. By the way, 65 percent of the workers are united in them.

The objectivity of the assessment of everyone's contribution is guaranteed by the coefficient of labor participation. It is raised by 0.5--for the use of progressive methods of labor, the execution of related operations, and the efficient use of equipment; by 0.25--for the manifestation of professional mastery, by 0.25--for assistance and the transmittal of progressive experience to comrades, the prevention of work stoppages, and personal initiative. The maximum value of the coefficient of labor participation must not exceed 2.0.

The coefficient is reduced (to zero) for the lowering of the rhythm of work in comparison to the total rhythm, the output of articles of low quality, the violation of the daily routine, etc.

The concrete value of the coefficient of labor participation is established by the council of the brigade. Its reduction is undertaken in the presence of those to whom the given measure is applied. All workers familiarize themselves with the protocol of the session of the council.

V. Brusnetskiy, deputy chief of the labor and wages department of the Mogilev-Liftmach [Mogilev Elevator Machinery] Production Association:

On the practice of planning the work of brigades. In this important matter the shop economists, the engineers for norm setting, dispatchers and foremen are involved. For every subsequent month, the brigade receives the task not later than the 25th. For every subdivision a so-called brigade-complement is worked out--integrated norms and assessments for all components and operations. The basic indicators are production volume (in norm-hours), products list, number of workers, wage fund, labor productivity, and rhythm.

After confirmation of the monthly program by the chief of the shop, the foreman notes down all plan indicators in the labor passport of the brigade. The foreman and the brigade leader compose the report on the fulfillment of the plan. In it are stated the brigade-complements completed and accepted by the division of technical control, i. e., final production.

The calculation of the plan indicators of the brigade is done with regard to the level attained during the base period (usually the preceding quarter), with correction according to the assigned index of labor productivity (from the reported number of the brigade in calculations for the year, only those absent for valid reasons--call into the Soviet Army or retirement--are excluded).

In the brigade-complement the dates of the beginning and the completion of the manufacture of articles are indicated. The brigade leader takes stock of what is completed by everyone. These data are also required for the determination of the coefficient of labor participation.

Source: "Promyshlennost' Belorussii", 1982

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## LABOR

### NEW REGULATION ON THE 'WATCH' METHOD OF ORGANIZATION OF OPERATIONS

Moscow EKONOMICHESKAYA GAZETA in Russian No 21, May 82 p 16

[Regulation adopted by USSR State Committee for Labor and Social Problems and the AUCCTU Secretariat in agreement with the USSR Ministry of Finance: "Standard Regulation on the 'Watch' Method of Organizing Operations at Enterprises and Organizations in the Petroleum, Gas and Timber Industries, Construction, Geological Prospecting and Rail Transportation"]

#### [Text] 1. General Provisions

1.1. The "watch" method of organizing operations is used when production projects (sections) are located at some distance from the location of the enterprise or organization, when work at them is done on a rotating basis by personnel who do tours of duty during which they live in specially built field camps at the projects (sections) and which regularly return to the town where the enterprise or organization is located after a specified period.

1.2. The decision to make the transition to the "watch" method of organizing operations is made by the manager of the enterprise or organization in agreement with the respective trade union committee and with permission of the superior organization on the basis of technical-and-economic calculations which substantiate the efficiency of its use as compared to other methods of conducting the operation.

1.3. The manager of the enterprise or organization shall be responsible for organizing work at the project (section), for delivery of the workers from the town where the enterprise or organization is located to the project (section), and back, for the living conditions of those living in field camps, for the organization of trade and food service in those camps, and for medical and cultural services to the workers.

#### 2. Organization of Work

2.1. The organization of work by the "watch" method must ensure that the work at the project (sections) is done at a smooth pace, continuously and in a coordinated manner, that the rules on workplace health and safety and operating rules are observed, that machines and equipment receive technical maintenance and repair so that they operate without interruption, that there be continuity



in staff and line administrative personnel, and that inventories be preserved during work by rotating ("watch") crews when projects (sections) are located at a considerable distance from the place where the enterprise or organization is located. The replacement crew ("watch") shall be made up at the place where the enterprise or organization is located and shall be delivered in an organized way to the production projects (sections) and back.

1.2. The specific conditions for the organization of production when operations are conducted by the "watch" method shall be reflected in documents the enterprise or organization is to draft on how the operations are to be performed (proyektno-tekhnologicheskaya dokumentatsiya).

The funds to reimburse the additional costs incurred in using the "watch" method of conducting operations are provided for by ministries and departments in the production cost of the industrial product within the limits of the cost level established in the plan, estimated-cost documentation (in construction--by agreement with USSR Gosstroy), or the cost of hauling by rail.

1.3. In the "watch" method the time to be worked and the length of the tour of duty of crews shall be fixed by the management of the enterprise or organization in agreement with the respective trade union committee. The schedule for replacement of crews shall be established on the basis of work and rest schedules adopted at the given enterprise or organization, the distance of the projects (sections), the season in which work is being done, as well as the possibility of using transportation.

### 3. Organization of the Delivery of Workers

3.1. The workers shall be delivered to the projects (sections) from the place where the enterprise or organization is located and back by air, rail, highway, or river transportation on the basis of long-term contracts concluded with the organizations of the ministries of railways, civil aviation, the river fleet or of motor transport.

Transportation facilities belonging to the enterprise or organization may be used to deliver the workers from the place where the enterprise or organization is located to the projects (sections) and back.

3.2. The type of transportation shall be chosen so as to take into account the lowest costs and shortest time workers spend en route to and from the workplace.

3.3. The enterprise or organization shall pay the workers for the time spent traveling from the place where the enterprise or organization is located to the field camp and also to the workplace (project or section) and back.

### 4. Organization of Field Camps

4.1. For every field camp a project plan shall be drawn up, including a plan of the camp in relation to the locality, the makeup of interior spaces, the supply of power, water and heat, communications, the planned access roads, the



rationale of the method chosen for delivery of personnel, confirmed by a calculation, and the estimated cost of building and maintaining the camp. In addition, the project plan shall reflect the questions of organizing food service, rest and leisure of those living in the camp and their medical and cultural services. The project plan is subject to approval by the manager of the enterprise or organization and subject to clearance with the respective trade union committee and state public health inspection authorities.

4.2. Field camps shall be so located as to meet the relevant public health standards and the requirements of fire safety and shall be as close as possible to the projects (sections) where the work is done. It shall be a mandatory condition in selection of a location for the field camp that everything be done to shorten the workers' travel time from the place where they live in the field camp to the place where they work and back.

4.3. The allotment of space to various functions in field camps shall meet the standards established for those living in dormitories, and the level of amenities furnished them shall be determined on the basis of the region and the time the work will take, and as a rule shall be made up of stock buildings and mobile, container and collapsible accommodations and in certain cases--of railroad passenger cars or river vessels converted so as to take into account the natural and climatic conditions and public health and living requirements.

4.4. The readiness of a field camp to be opened for operation shall be determined by a commission whose members shall include representatives of the management of the enterprise or organization, the trade union committee, the trade and food service enterprise, and the public health and fire control services. The certificate of the commission accepting the field camp for operation shall be confirmed by the manager of the enterprise or organization.

4.5. Workers doing jobs by the "watch" method must be furnished three hot meals daily. The location and equipment of food service facilities shall be cleared with the regional public health and epidemiology service.

4.6. The administration of the enterprise or organization conducting operations by the "watch" method shall make a joint decision with health care authorities on medical service to crews in field camps, on the staffing of the camps with medical personnel, on the supply of medicines, and on procedure for evacuation of the sick.

## 5. Work and Rest Schedule, Recording of Work Time

5.1. In the "watch" method of organizing operations the management shall in agreement with the respective trade union committee set up a cumulative system of recording the time worked by workers, engineering and technical personnel and employees, as a rule for the month or other period of time (depending on the sector of the economy, the type of operation and the natural and climatic conditions) so that the length of work time over the recording period does not exceed the allowed number of working hours fixed by legislation.

5.2. In the "watch" method of organizing operations the work time and rest time must be regulated by rotating schedules which shall be approved by the management of the enterprise or organization together with the respective trade union committee for the entire recording period and shall be made known to the workers no later than 1 month before they take effect. The schedules must state the following: the time when daily work (shift) is to begin and end, the time of breaks for rest and food, and also the time for daily (between shifts) and weekly rest. Days off during the week may come on any day of the week.

5.3. Depending on the natural and climatic conditions and specific nature of the operations, the length of the workday (shift) shall be fixed in each specific case by the management of the enterprise or organization in agreement with the trade union committee, but not to exceed 10 hours, though with permission of the ministry or department, cleared with the respective central trade union committee, the maximum may be 12 hours, offset by reduction of work time at some other time during the recording period, or with additional days off furnished during that same period on the basis of 1 day of rest for every 7 hours of overtime. The length of the work shift may not be increased (to 10-12 hours) in operations where a short workday has been established because of harmful working conditions.

Work beyond the length of the shift envisaged by the schedule for workers in the respective categories may be allowed only with permission of the trade union committee of the enterprise or organization and only in the exceptional cases envisaged by Article 55 of the RSFSR Labor Code and relevant articles of the labor code of the other union republics, specifically to avert a public calamity or natural disaster or workplace accident or for immediate repair of their damage.

5.4. The length of the daily (between-shift) rest of workers may be reduced to 11 hours for specified periods of work. In this case the hours of daily (between-shift) and weekly rest unused shall be totaled up and granted in the form of additional days off during the recording period. The number of weekly days off in the course of any month must at least equal the number of full weeks in that month.

5.5. The length of stay in a field camp shall be established by the management of the enterprise or organization in agreement with the respective trade union committee depending on the type of operation, the character and specific nature of the work, and the natural and climatic conditions.

5.6. The work and rest schedule of line and staff administrative personnel exercising direct supervision at the project (section) must as a rule coincide with the schedule of work and rest of the main body of workers.

5.7. The schedule of work and rest of workers rendering services to those living in field camps shall be established in each specific case so as to take into account the specific nature of the operation.

5.8. Records on use of the calendar time of workers in the "watch" method of organizing operations shall be kept on the basis of the table of work time use

approved by USSR Central Statistical Administration on 17 December 1974 (Forms T-12 and T-13).

5.9. Persons being sent to projects (sections) where operations are conducted by the "watch" method shall be duly issued an official travel certificate.

5.10. The table for recording work time shall be kept for the workers by the person who is the immediate supervisor in the given area of operation, and shall be submitted monthly with his signature to the bookkeeping department of the enterprise or organization. The table shall state the number of hours actually worked during the workday and the month and also the days off for overtime.

5.11. In connection with the "watch" method specific records shall be kept in the enterprise or organization and rest time of each worker, and the document shall be kept by months along with the cumulative total for the entire recording period.

5.12. When operations are organized by the "watch" method in the regions of the Far North and in localities equivalent to the regions of the Far North, records shall be kept on the calendar time the workers employed at such operations spend in these regions and localities.

5.13. It shall not be allowed that a worker stay in the field camp on days off granted because of working more than the normal time during the recording period.

## 6. Requirements the Workers Must Meet

6.1. When the management of an enterprise or organization is organizing operations by the "watch" method it must see that the workers pass medical examinations prior to hiring and periodic medical examinations in accordance with Order No 400 of the USSR Ministry of Health dated 30 May 1969.

6.2. The following may not be enlisted for work done by the "watch" method:

i. pregnant women and mothers nursing an infant as well as women who have children under 18 months old;

ii. workers and employees under age 18.

Women who have children at least 18 months of age, but less than 8 years, may not be enlisted for this work without their consent.

## 7. The Setting of Quotas and Remuneration of Workers

7.1. The setting of work quotas in the context of the "watch" method of organizing operations shall be done in conformity with the norms and standards of labor expenditures in effect.

7.2. Workers shall be remunerated as follows in the context of the "watch" method of organizing operations:

- i. piece-rate workers--for the volume of work done in accordance with existing quotas and piece rates;
- ii. time-rate workers--at the rates of the skill categories for which they qualify and monthly salaries for time actually worked;
- iii. engineering and technical personnel and employees--at monthly salaries for time actually worked.

Bonuses shall be awarded to workers in accordance with the bonus regulations in effect at the enterprise or organization.

7.3. Regional coefficients, coefficients for work in the desert, in arid places, and in the high mountains, which are in effect at the place where the work is done for workers of the respective enterprises and organizations shall be applied to the wages of workers.

7.4. Days off granted because of longer-than-normal work time in the recording period shall be paid for according to the rate schedule (salary) the worker received up to the date when the day off was granted, on the basis of a 7-hour workday.

7.5. Workers discharged before the end of the recording period may with their consent be discharged as of a date that takes into account the days off to which they are entitled because they have worked more than the normal work time. These days shall be paid for in the same manner as additional days off granted during work at the enterprise or organization.

7.6. Compensation at the rate established by legislation for particular categories of workers of the respective sectors of the economy shall be paid to workers assigned to do work by the "watch" method for every calendar day they spend in the place where the work is done during the tour of duty and also for the time spent en route (not to exceed 2 days for each trip from the place where the enterprise or organization is located to the place of work and back).

The worker shall be paid his rate (salary) on the basis of a 7-hour workday for time spent traveling (not to exceed 2 days for each trip from the place where the enterprise or organization is located to the place where the work is done and back). The coefficient applied to the wage, envisaged in Paragraph 7.3 of the present Standard Regulation ..., shall not be applied in this case. This time shall not be included in computing the normal number of working hours.

7.7. Percentage supplements to the wage shall be paid to the workers of enterprises and organizations traveling to the regions of the Far North or localities equivalent to the regions of the Far North, and they shall be granted additional leave for work in those regions or localities in the manner and under the conditions envisaged for persons working permanently in those regions and localities. Calendar days of work in the regions of the Far North and in

localities equivalent to those regions and time spent en route (not to exceed 2 days for each trip from the place where the enterprise or organization is located to the place where the work is done and back) shall be included in length of service to qualify for the percentage supplement and additional leave.

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## LABOR

### ECONOMIST ADVOCATES EQUITABLE SALARIES FOR SCIENTISTS

Moscow PRAVDA in Russian 29 Jun 82 p 3

[Article by G. Lakhtin, professor and doctor of economic sciences, Moscow:  
"How To Remunerate a Scientist's Work"]

[Text] The productivity of scientists--and consequently the effectiveness of science as well--depends in large part on how their work is remunerated. Questions such as what the scientist should be paid for, how he should be paid, and how much he should be paid are being put ever more sharply as science assumes a growing role in the country's economic and social development. The present system of remuneration is being criticized, sometimes quite soundly. Many of the measures proposed seem less sound and often half-baked. Apparently because straightforward principles on which the system of remuneration should be built have not yet been worked out.

Since the mid-fifties the wages of the staff scientist have been determined by his position, his academic degree, his length of service and the category of the institution in which he works. The connection between the wage and the academic degree is being criticized more than anything else. But is this connection so improper?

A man "grows" in two ways through his work: the accumulated knowledge and skills allow him to perform the same duties better, and the experience gained allows him to broaden the field for application of his energies, to organize the work of others more properly and to manage them. In science this "duality of career lines" is especially obvious. Creative work is first of all a qualification that includes not only what has been acquired through education, but also the ability to do scientific work. At the same time present-day science is a field of coordinated actions of many people, and its organizational aspect is just as important in determining the success of research and development as the creative aspect. Not uncommonly a brilliant researcher proves to be a very mediocre organizer, and vice versa. Society is interested in taking from each what he is able to give. It should also pay accordingly. Consequently, the first principle is that the system of remuneration must be two-dimensional; the connection between the wage and the job slot level and qualification needs to be differentiated.

At present the academic degree is used as the criterion of qualifications. One can argue about how perfect it is, but often the question of whether it is necessary is asked instead. Advocates of abolishing the "payment for a degree" propose a unidimensional "job slot--salary" scale. This is equivalent to refusal to evaluate and reward improvement of qualifications within a job slot. Society also has a need for a junior scientific associate, as he gains knowledge and experience, to become an ever more valuable aid to the senior associate and for him to rise to the senior level more rapidly.

There are proposals for establishing a relation between possession of an academic degree and appointment to a position. Let us suppose that only doctors of science may be laboratory chiefs and only candidate senior scientific associates. The attempt here is to make the description of qualification in and of itself the criterion of fitness for a position. But after all, obtaining a doctorate does not mean that one has acquired the attributes of an organizer. The more thoroughly the "two career lines" are differentiated, the more straightforward and objective the system of remuneration will be. There is hardly any point in increasing the number of positions so that there are more of them than there are organizational levels. "The pursuit of positions" may be more harmful than the "pursuit of degrees."

In the two-dimensional scale there would be several qualification levels for every positional level or grade. Do they have to be fixed, or can they be restricted by establishing a rather broad salary bracket? At present the salary is unambiguously determined. If a worker holds a position of laboratory chief in a first-category institute, has a candidate's degree and more than 10 years of service, he is given a salary of 400 rubles--no more and no less. It would seem that replacing this fixed amount with a broad range, say, from 300 to 500 rubles, would make it possible to introduce a flexible relation between the salary and the qualification. But life gives evidence of the opposite: instead of spreading to the different ends of the average level, salaries begin to converge toward it. This begins to happen as soon as the possibility opens up of taking away a bit from those who are highly paid and adding to the lower paid. This was the case, for example, when the "Karpov" system was introduced. The reason was that the assessment criteria were not straightforward and the administration tried to raise the wages of young associates, who are more apt to leave, even if it had to affect senior associates. But this undermines the general incentive for improvement of grade and qualifications. Which gives rise to a second principle--that fixed salaries are necessary.

The next question may seem naive--What actually is being paid for: ability, knowledge, experience, in short, potential or actual output? In the general case--both the former and the latter. A salary is assigned to an associate when he is hired, when he has not yet produced any results and when at best it can be based only on previous achievements as evidence of ability to accomplish new things. Later on he may work either better or worse than anticipated, but the salary will not change on that basis. After all, even if periodic salary review is introduced, for example, on the basis of performance over a 2-year period, even then the new salary will reflect past rather than present performance. There needs to be a separate channel for remuneration for actual success in current work. That is, the salary needs to be combined with the bonus,

which should be sizable enough to serve as an incentive. That is the third principle.

But at this point it is worthwhile to take into account that the character of work in science is not always the same. Some people are actually conducting research on specific topics, at times their work involves progress toward a goal lasting many years. Achievement of that goal does signify an actual result. Others support this work, with computations, with analyses, and so on, and their task is the daily performance of certain duties. It is obvious that the work of these two categories of specialists needs to be remunerated in different ways, and that is the fourth principle. In the case of the former all payments during work on the topic are like advances--there must be payment every month, but the results from which one can judge the quality of the work sometimes occur every few years; intermediate results ordinarily are not very indicative. A one-time award at the end should correspond to the one-time character of the end result. It would seem that this only could be some form of bonus. The latter has everyday results, though they do not constitute a scientific product that stands on its own. There should be regular remuneration, in the form of a quarterly bonus, say, to correspond to the regular input of results. If one typist is paid to type a report on excellent scientific work, and a second on poor work, this does not mean that the former needs to be paid more. It is their work that has to be evaluated and rewarded.

Before work is rewarded, its results have to be measured. It is not simple to do this in science. It takes too long to wait for the final results that guarantee a confident evaluation, and therefore one has to take into account the intermediate results, mindful of performance of various other assignments. That is why the foundations of differences in remuneration become shaky. When it is not possible to prove that one worker is better than another, the administration prefers to pay them equally. Bonuses are paid in proportion to the basic wage, are merged with it, and become an inseparable component of it.

This tendency toward leveling cannot be overcome unless we learn to discover differences that would be reflected in remuneration of work. How many levels of remuneration can be established, say, for senior scientific associates as a function of qualification depends entirely on how many qualification steps we can confidently distinguish. That is how academic degrees come to serve as a "remunerated factor," which signify officially established qualification levels regulated by the state and therefore instilling confidence. Consequently, the fifth principle is that the system of remuneration needs to be structured in accordance with the system for evaluation of work. Measures to improve the system of remuneration need to be preceded by measures to improve the system of evaluation.

And the most important question is how much to pay? At present the average level of remuneration in science is lower than in industry or in transportation. For that reason the influx of fresh blood into science, especially of young people, is slacking off. The possibilities of recruiting gifted people are correspondingly diminished. Science obviously deserves priority in the level of remuneration even if this is achieved by a certain reduction of the number of persons employed in it. The "numbers game" does not promise much

success in science. If a scientist is not making an effort, then one should react not by reducing his salary, but by moving him to another sphere of activity where he will be of use. Moreover, the one who is making an effort should be paid more than he could obtain in other spheres.

In my view this should be regarded as the sixth and most important principle. The system for remuneration of scientists should be combined with a system for certifying them, including the rules of dismissal, defined as accurately as possible, so that there are no ambiguous interpretations. It is moreover indispensable to envisage measures that ensure an objective approach; otherwise it is not just the least useful who will be discharged, but those who have the least protection.

And finally, the last principle--scientific soundness. Work in science is a complex social phenomenon, its remuneration is a nexus at which economic, social welfare and psychological problems are intertwined. The correctness of the decisions made will depend on how much they are studied. Opinions are not enough here, even those which are highly authoritative. The knowledge that comes from specialized research is necessary. Just as not a single new machine is introduced without a trial run, so new methods of remuneration cannot be introduced without evidence of their advantages.

Moreover, "man does not live by bread alone," nor are people moved by financial incentives alone: first into science and then within science. In the social organism material interests are only one of the driving forces. That is why to use it correctly one needs to be familiar with its interrelationships with the other forces. The more thorough this research, the more effectively the scientific potential will begin to be used.

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## EDUCATION

### EDUCATION IN UNION REPUBLICS

#### Educational Progress, Problems Discussed

Tallinn SOVETSKAYA ESTONIYA in Russian 7 Jul 82 p 3

[Unsigned report on discussion of public education law at 5th Session of 10th Convocation of Estonian SSR Supreme Soviet: "The Public Education Law in Action"]

[Text] In discussions of the question "On the Course of Fulfillment of the Estonian SSR Law on Public Education," it was noted that purposeful work is being done in the republic on providing for the right of Soviet citizens to education guaranteed by the ESSR Constitution. The Soviet state spends large funds for this purpose, opening up to everyone all roads to the mastery of knowledge.

Deputy R. El'vak (Nuyaskiy election district No 275) dwelt in detail on questions of preparation of pupils of general educational schools of Vil'yandiskiy Rayon for work. The system of polytechnic training that has existed till now, he remarked, meets far from completely present-day requirements. This applies first of all to training of tractor operators, drivers, milkmaids, construction workers, for the fact is that there is a shortage of them at many farms. At the present time an interschool education-production combine operates in the rayon. Here 720 young men and women are pursuing polytechnic training, and the majority of them are obtaining a trade. At the present time, there are 38 study groups; the young people can select any of 13 vocations. Rayon organs are attentively following the staffing of the educational combine with highly qualified instructors and the strengthening of its material-technical base.

During the last five-year plan, the network of general educational schools was expanded in the rayon. A new secondary school was opened in Vil'yandi, and Nuya Secondary School acquired a modern educational building. But the material base of a number of schools does not yet correspond to present-day requirements, for which reason more attention should be devoted to capital repair of buildings and to supplying repair organizations with necessary materials.

During the present five-year plan, it is planned in the city of Tallinn, said Deputy A. Kivilaan (Tallinskiy-Sirbiskiy election district No 24) to build nine general educational schools, a sports school, a sports complex and a



second secondary schools. Repair work is proceeding on a broad scale on facilities of educational institutions. Last year alone, the repair and construction trust of the city soviet's Ispolkom performed work in the amount of more than one million rubles. Sanitation repairs and the repair of heating and other systems were performed by enterprises serving as patrons of the schools. An operational administration for educational institutions has been created in Tallinn for increasing effectiveness in the performance of this work. The housing conditions are being improved for personnel of this system. Still much remains to be done in the republic's capital in the field of further development of public education. For example, approximately one-fourth of the school children study in a second shift.

The speaker devoted much attention to questions of spending of free time by school children. During the present five-year plan, there will be opened for children an additional 25 children's and young people's clubs at place of residence. They now have at their disposal 24 sports grounds, 164 playgrounds and tens of playrooms. The number is constantly growing of groups with particular interests under housing operational administrations of the city, summer work camps and detachments working on civic improvements.

The Soviet state has opened for its citizens all roads to education, Deputy E. Grechkina (Tallinskiy-Petkeskiy election district No 70) noted. Questions relating to education are at the center of attention of party and soviet organs. This is graphically shown by the fact that the Central Committee of the Communist Party of Estonia, the ESSR Supreme Soviet and its permanent commissions and the ESSR Council of Ministers are methodically discussing questions relating to the development of general educational schools.

A central place is occupied by the education of an all-round developed individual. Compared to the preceding year, the number of graduates receiving a gold medal doubled. Today's graduates are well oriented in regard to current events. They have deeply studied the decisions of the 26th CPSU Congress and the 19th Komsomol Congress.

The Estonian SSR Ministry of Education jointly with several other departments has started work on a new special goal program "The School as an Ideological Institution." The success of the process of unified education and upbringing of young people largely depends on the level of ideological-political and scientific-methodological training of the teacher and on his moral convictions. Here special attention should be devoted to the introduction of the advanced experience of Soviet pedagogy.

The speaker also dwelt on certain problems of supply of schools with full-value methodological materials, improvement of the system of vocational orientation and the like.

Deputy R. Vakhtas (Loksaskiy election district No 160) devoted most attention to questions of production practice of pupils in the schools of Kharyovskiy Rayon within the framework of polytechnic training. Recently, with the aid of sponsors, more favorable conditions have been created for labor training. Still difficulties are to be found in regard to the organization of training

practice within the framework of polytechnic training, especially with respect to the specialty of mechanization of agriculture. The main educational practical work is done on farms at harvest time, for which reason it is difficult to find people capable of supervising the studies of the school children. There is a shortage of equipment: there are many children to one tractor, and they do not have enough time for practical work. There is also a shortage of attachments. In the opinion of the speaker, farms where students engage in practical work should be allocated additional tractors and other equipment.

In recent years, the number of young teachers graduating from VUZ's in the republic has significantly increased. Deputy I. Nuut (Tartuskiy-Veerikuskiy election district No 139) dwelt on certain problems of their training. He said that despite a certain achieved success much still remains to be done on deepening and expanding the ties of higher and secondary specialized educational institutions with general educational schools and public education organs.

The training of pedagogic cadres should be conducted at VUZ's simultaneously with scientific work. We have a number of well-known scientists actively engaged in research on current pedagogical problems, but the results of their work are not sufficiently being introduced into practice. We should also do a better job of increasing the social activity of young specialists and devote more attention to the creation of good living and everyday conditions for them.

Tartu State University is a source of cadres of young teachers. In recent years, its material base has been significantly strengthened. This can also be said of Tallinn Pedagogic Institute imeni E. Vil'de. But construction workers should speed up the opening of the institute's main building.

In Narva, purposeful work on ensuring the right of citizens to an education guaranteed by the Estonian SSR Constitution is going on, said Deputy R. Naumova (Narvskiy-Shkol'nyy election district No 117). There are in operation in the city 12 schools, 4 vocational-technical schools, a polytechnikum, a correspondence division of Tallinn Polytechnic Institute. Last year 99.7 percent of the graduates of 8th-year classes were to be found in all the educational institutions providing a secondary education. At the same time, the questions of pedagogic cadres has not finally been resolved.

The city's pedagogic collective is involved in the search for new forms in educational work with children. Special attention is paid to close relations of school, sponsoring enterprises and the public of the microrayon as well as deputies of the city soviet. The cooperation of a microrayon's school and Palace of Culture, where recreational evenings and evenings of interesting meetings and discotheques are arranged, deserves to be noted.

Schools and sponsoring enterprises jointly organize detachments of senior-class pupils for recreational times and work of children in summertime. In 1981, four such detachments were sent to sponsored kolkhozes and sovkhoses and in 1982--seven. School representatives are appointed as commanders.

The scientific character of the educational system and its constant enrichment with the achievements of science, technology and culture were questions to which specially pointed attention was devoted in the speech of Deputy B. Tamm (Tallinskiy-Politekhnikheskiy election district No 83). In the epoch of the scientific-technical revolution increasing attention must be paid to the training of highly qualified young specialists. But it must be noted that in recent years there has been a reduction in the popularity of such leading disciplines as physics and mathematics. But it is they that serve as the foundation and the start of progress to the heights of all precise sciences. The physics and mathematics marks of those entering Tallinn Polytechnic Institute are not heartening. It is true that persons finishing special classes are distinguished by a good knowledge of these subjects, but unfortunately the number of such classes is being reduced. The ESSR Ministry of Education should devote special attention to this problem.

The speaker dwelt as well on questions of operation of circles engaged in interests contributing to the popularization of these or those disciplines in schools and to raising the level of pupils' knowledge. This work should also include Estonian Television, which has organized, as has been done in many republics of the country, systematic television programs—courses on the key disciplines of secondary school.

The specially equipped classroom system of teaching has been introduced in all Tartu schools. It ensures a high level of instruction and creates good conditions for high quality of studies. This was discussed in a speech by Deputy M. Ustinova (Tartuskiy-Pervomayskiy election district No 147). During the last five-year plan, two new schools and four kindergartens were built. In the present five-year plan, the construction pace of educational institutions is increasing still further. But, in the deputy's opinion, existing plans of schools do not always correspond to present-day requirements.

The connection between schools and sponsors—personnel of the city's production enterprises and of the rayon's kolkhozes and sovkhoses—is being strengthened. This contributes to better vocational orientation of the children. Sponsors participate in the life of the school and help in the repair of educational institutions and of educational and sports equipment.

The speaker emphasized the need of strengthening labor education in the schools by the expansion and study of different technical specialties directly in production.

Deputy L. Murtazina (Tallinskiy-Tedreskiy election district No 9) emphasized that in the fulfillment of the "Estonian SSR Law on Public Education" a definite role belongs to trade-union committees and their commissions for assistance to family and school. These commissions unite more than 6,000 trade-union activists, pacemakers of production, engineering and technical personnel and enthusiasts in work with children. The chief direction of the commissions' operation is increasing the direct influence of the working class in the formation of communist ideals, high morality and an active position in life in young replacements. For this purpose meetings are regularly conducted of pupils with veterans of the Great Patriotic War and of labor and production pacemakers,



excursions are made to factory museums and lessons in courage are given. For example, the commission for assistance to family and school in the upbringing of children and teenagers of Tallinn Electrical Equipment Plant imeni K.I. Kallin organizes in the course of a year 30 such meetings with pupils of the sponsored Secondary School No 40. A school museum of the history of the plant is taking shape.

The attention of labor collectives is being concentrated on the upbringing of children in the family; closer contacts have been established between trade-union committees and schools where children of workers study.

The leading role of the working class, it was pointed out in the speech of the first deputy chairman of the Estonian SSR State Committee for Vocational and Technical Education, E. Alas, is increasing under the conditions of developed socialism with the rise of the general educational and cultural level and of its political awareness and activity. For this reason the struggle is systematically continuing for increased effectiveness of the teaching and educational process in the vocational and technical schools of our republics, where cadres of highly qualified workers are being trained for modern production. This work is based on the achievements of pedagogy, science and practice and on the advanced experience of the best enterprises. Independent work by students occupies an important place in training. A great deal of attention is paid to mastery of the Russian language—the language of exchange for all peoples of our Motherland.

More than 70 percent of the students of vocational-technical educational institutions are komsomols. They participate actively in technical work, sports and cultural life. At the present time, construction is under way in the republic of five new vocational-technical secondary schools; existing ones are being expanded and their material-technical base is being strengthened. In this way, the number of places in them will be increased by 5,000 during the current five-year plan. Measures have been implemented for the training of cattle breeders and rural machine operators.

Under the guidance of party organizations, said Deputy L. Piysalu (Rakvereskiy-Kingiseppski election district No 235), the pedagogic collectives of the schools of Rakvereskiy Rayon are engaged in purposeful ideological-political education of students. Good conditions have been created for this. The network of educational institutions has become fuller: in recent years three new schools were built and annexes to several old ones were erected. Studies are conducted with the use of the specially equipped classroom system. Next in line is eliminating of second shifts. Many schools have modern recorded language study rooms. But there is not enough methodological material to obtain from them a hundred-percent return. Many teachers lack the skill to handle this not simple equipment.

The collectives of farms and enterprises have been given important tasks in connection with the implementation of the food program. Schools must make their contribution to this work by providing assistance to farms at harvest time as part of their educational practice.



The important role played in the system of public education by educational institutions preparing middle-echelon certificated specialists, Deputy Kh. Kallaste (Rakveraskiy-Kaarliskiy election district No 225) said is clear. They thus require much consideration. It would appear to be advantageous, the speaker noted, to provide for the creation of a new teaching material base for rural secondary educational institutions directly in the national-economic plan rather than on the basis of limits set on construction assigned to rayon agroindustrial associations. So far questions have not been resolved of centralized supply of secondary specialized institutions with teaching materials and visual aids.

The deputy expressed in the name of his voters full support for the decisions of the May (1982) Plenum of the CPSU Central Committee aimed in particular at the retention of qualified cadres in rural areas. An effective measure in this connection would be radical improvement of vocational orientation of students. Rural youth must be drawn on a much wider scale to mastery of the specialty of machine operator.

The construction of educational institutions in the republic is going on at an accelerated tempo. New schools and tens of kindergartens are opened each year. Deputy L. Laagus (Khyademeesteskiy election district No 222) spoke of the progress of their construction in Pyarnuskiy Rayon. In the last three years, six kindergartens were built here for 710 children. This year one for 140 places will go into operation. Much attention is being paid to the preparation of preschool children for the first-year class. Pedagogic cadres are being strengthened. This year about 30 young teachers will conduct their first lessons.

The deputy named among unsolved problems difficulties in connection with carrying out capital repairs. This is due to the fact that most schools in the rayon are old and also because the Pyarnu Repair and Construction Administration is not coping with the plans of such work.

In the speech of E. Tiyt, chairman of the Vyruskiy Rayon Ispolkom, much attention was paid to questions of training of young agricultural specialists. Of the rayon's six secondary schools, four already provide the possibility of acquiring the vocations of machine operator and stock breeder. But practice shows that the efficiency of such training is not the same in different schools and depends primarily on the closeness of the tie between school and base enterprise. At the present time, preparations are proceeding in the rayon for the creation of an educational-production combine—a progressive form of political education.

Farms so far have been experiencing a shortage of plant-growing experts, automotive mechanics, electric and gas welders and still other highly qualified workers. In this connection, the reorganization of Antslaskiy Sovkhoz-Tekhnikum into a secondary vocational-technical schools is included in immediate future plans. Corrections should be incorporated in the teaching program of Vyrulst Secondary School and training should also be started there of young agricultural specialists.

The speaker subsequently dwelt on certain questions of improvement in the education of children of preschool age. An appropriate long-term plan has been worked out to 1990. But its realization would require the construction in Vyrta of three new children's preschool institutions and the expansion of their construction in rural areas.

#### VUZ Entry Qualifications Discussed

Minsk SOVETSKAYA BELORUSSIYA in Russian 25 Jun 82 p 4

[Interview of Vladimir Trofimovich Vodnev, chief of Administration of Higher Educational Institutions of the BSSR Ministry of Higher and Secondary Specialized Education, by SOVETSKAYA BELORUSSIYA correspondent I. Mostkov: "Who Will Enter VUZ's?"]

[Text] For those senior-class students of schools, secondary specialized and vocational-technical educational institutions preparing to Enter VUZ's, an intense period of strenuous preparation for entrance examinations has arrived. They are, of course, interested in the special features of the present admittance campaign and changes in the rule of admission. These questions of a correspondent of SOVETSKAYA BELORUSSIYA are answered by Vladimir Trofimovich Vodnev, chief of the Administration of Higher Educational Institutions of the BSSR Ministry of Higher and Secondary Specialized Education.

[Answer] First of all, it should be noted that this year there are no essential changes in the holding of the entrance examinations nor in the manner of registering in VUZ's. Admission rules have now remained for many years essentially stable, since they correspond to their main objective: to open the way to higher education for the most prepared and capable youth. Here there is taken into consideration former achievements of the graduates—in school, tekhnikum, vocational-technical school, their work length of service and a number of other factors important to the quality of recruitment.

[Question] The rules remain stable, but most graduates are entering VUZ's for the first time and, judging by letters to editors, they are not always able to figure out the provisions of these rules. For example, they frequently ask the editorial office to let them know of the admittance procedure to this or that VUZ. Questions of benefits for individual categories of graduates are also found to be difficult. Would you kindly mention, Vladimir Trofimovich, the chief ones of these provisions.

[Answer] Admission rules to VUZ's are the same for the entire territory of the country. A graduate can be admitted to the regular form of study at any VUZ in this or any other republic.

As for benefits, I shall begin with admittance to regular study [statsionarnoye obucheniye] without entrance examinations. The right to such admittance is possessed, first, by graduates of preparatory divisions. At the same time, those of them who have studied without separation from production have the opportunity

to continue to study at a VUZ in any form--regular, evening or correspondence. Second--those who have been retired into the reserve on reduction of staff, for reasons of health or length of service from the Armed Forces or organs of the KGB or the USSR Ministry of Internal Affairs, including officers, ensigns, warrant officers and other military personnel of additional service with completed higher military or civil education. Third, those who have been awarded medals in school, graduates of secondary specialized and vocational-technical institutions who have received diplomas with distinction in a specialty corresponding to or related to the one chosen at the VUZ upon embarking on a specialty of which there is a shortage.

[Question] Are they, as before, enrolled upon submission of application?

[Answer] No. It turns out that the person is in the best position who succeeds in first submitting the application. This year enrollment of outstanding students for these specialties will take place regardless of when the applications were submitted from 20 through 25 July. By this time everyone who is entitled to such enrollment will be able to submit his documents. And should there not be enough allocated places for some of them, they will either be able to enter likewise without examinations some other specialty in which there is an acute shortage or agree to test their mettle in the course of competitive admission to such a specialty. It should be taken into consideration, of course, that the competition for such specialties for outstanding students is on the basis of a single examination.

[Question] How many places can graduates entering without examinations aspire to?

[Answer] This is determined by rectors of VUZ's for each specialty experiencing an acute shortage. They have the right to bring up the number of such places to 80 percent of the admittance plan. I would like to emphasize that big benefits are granted to graduates, whose average mark is not lower than 4.5 in the document on secondary education, on enrolling in a specialty experiencing an acute shortage. They enroll on the basis of the results of two examinations if their marks on them are not lower than 8.

One special feature of the present admittance: formerly it was necessary to obtain no less than 4 for such preferential enrollment for each of the two examinations. Now it is possible to get a total of 8 by receiving a "5" and a "3".

[Question] The experience of such preferential admission to specialties in which there is an acute shortage is small--this year such admittance will be done for the third time. Is it already possible to evaluate the first results?

[Answer] Without a doubt. It is no secret that the prestige of this or that specialty frequently has a spontaneous inception and far from always corresponds to the true merits of the vocation, the needs of the state for cadres and other truly important factors. It is paradoxical and sad that certain technical specialties needed by the country and very promising for the creative growth of their personnel do not sufficiently attract young people. Finally, at one time,

many of those who were frightened off by the competition for prestigious, or putting it more precisely, stylish, faculties enrolled in them. The benefits granted to those enrolling in specialties experiencing a sharp deficit attracted well prepared graduates and made it possible to markedly improve the composition of the students.

[Question] What other changes have been introduced in the rules of admission?

[Answer] They are not many of them. Benefits have been granted to persons entering health-care specialties who have successfully taken entrance examinations and who have a secondary specialized medical or pharmaceutical education and have worked no less than three years in health-care institutions as well as to junior medical personnel of these institutions with work service of no less than two years. They are the first to be enrolled.

New benefits are also granted to persons retired from active military service. Those of them who enter VUZ's on the recommendation of military units (recommendations are also granted to persons who were outstanding in combat and political training) will be admitted without competition to a number of specialties indicated in the rules of admission.

One specification has been introduced concerning admittance to evening and correspondence divisions for graduates of technical schools possessing diplomas with honors. They are enrolled without competition if they work in a specialty selected in a VUZ or related to it. Another specification applies to all graduates of vocational-technical educational institutions entering VUZ's for study without separation from production. They are the first to be enrolled on entering a related specialty in the year of graduation from a vocational and technical school.

In recent years, the question has not been quite settled in regard to the acceptance of documents providing the right to preferential enrollment in cases with the same mark totals. These documents were frequently accepted only after establishment of equal marks. Now such documents (copies of author's certificates for inventions, certificates of merit for achievements in school in individual disciplines, certificates of olympiad, competition, review and other winners are accepted at the time of submission of applications for admittance to VUZ's.

These specifications exhaust the changes in the rules of admittance but not the special features of recruitment in the present year. Such features should include, for example, special admittance to agricultural VUZ's on the basis of directions of local organizations of ministries of agriculture, water resources, the State Committee for Selkhoztekhnika. Graduates admitted on the basis of such directions are outstanding workers and kolkhoz farmers, persons retired from the Armed Forces and returning to permanent residence in a rural locality as well as active participants of student production brigades—they can be enrolled in VUZ's even where their marks are 1-2 points lower than required for the admission of other graduates.



[Question] Vladimir Trofimovich, you have only touched several factors of the present admission campaign...

[Answer] More precisely, changes and some special features, but I have far from exhausted all of the provisions of the rules of admission. And I definitely recommend that every graduate become acquainted with them in detail. The practice of past years shows that the great majority of conflicts and different misunderstandings and complaints have occurred because of a lack of knowledge of these rules by persons entering VUZ's and their parents.

But in learning all the special features and benefits provided by the rules, it should be remembered that the strongest win in a competition. All that is left is to wish them successful admittance.

### Preparations for New School Year

Tashkent PRAVDA VOSTOKA in Russian 2 Jul 82 p 3

[Article by S. Shermukhametov, Uzbek SSR minister of education: "School Is Getting Ready"]

[Text] The general-educational school has finished the 1981-82 school year. This was a year of further improvement of the quality of instruction, labor and moral education, of much work relating to overcoming of formalism in assessment of the results of the work of teachers and pupils and continuation of the strengthening of the connection of education to life and improvement of the preparation of pupils for socially useful labor. These and many other questions became the subject of serious discussion at the 6th Congress of the Teachers of Uzbekistan, which was held on the eve of the 19th Komsomol Congress. And this is most noteworthy, inasmuch as the chief subject of the 6th congress of the republic's teachers and the 19th Komsomol Congress was bringing up of a worthy young generation.

In the time that elapsed since the 5th congress of the republic's teachers, the directive of the party and the government on completion of the transition to universal secondary education was successfully fulfilled in Uzbekistan: 98.7 percent completed on time the 8-year and 99.2 percent the 10-year classes.

Much has been done in the republic on improving labor education and production training and strengthening of the educational material base. We now have 399 interschool educational production combines, where training is going on in 143 specialties. On termination of the 10th-year class, graduates receive two documents--one on secondary education and the other on acquisition of a vocation. In the new school year, we shall have at our disposal 508 educational production combines.

From year to year, there has been a growth in the number of pupils in schools and groups with extended day. Thus, while in the first year of the 10th Five-Year Plan, about 448,000 children were studying in them, today the number exceeds 1,127,000 children.

The educational material base of the schools is actively being strengthened; they are being equipped with modern scientific-technical means of training and visual teaching aids, which is one of the most important factors in raising the quality of knowledge.

In the republic, each year state investment in education increases. Within the system of the Uzbek Ministry of Education alone this year it amounted to 1,145,534,000 rubles.

It is gratifying to point out that in recent years school construction plans have been fulfilled successfully. For all sources of financing just in the years of the 10th Five-Year Plan, 1,241 general educational schools with 792,600 pupil places were opened.

Achievements also exist in the field of improvement of preschool education. Whereas in 1976, 19.1 percent of the children were being educated in preschool institutions, today the figure is 36.6 percent. We now have 7,605 permanent preschool institutions in which about a million children study and are educated.

All these are the results of the great concern of the party and the government for our children and the result of the determined work of public-education personnel and teachers in the republic.

...The final bell has rung in the schools, and the classes and corridors are empty. The children's voices are silent. But immediately, without an interruption, preparations in the schools have started for the new school year. In most of the schools, maintenance and capital repairs have already been completed. By 1 August, it is planned to finish the construction of new schools and other educational institutions, annexes and dining rooms. There have to be put in operation 223 schools with 130,296 pupil places and 250 children's preschool institutions with 39,589 places. Much has been done for organization of the summer recreation of the pupils.

It will also be necessary to bring in books, visual aids, equipment, furniture, fuel, methodological literature; we plan to open in the schools about a thousand new specially equipped classrooms for physics, chemistry, native language and literature, Russian language and literature, mathematics, history and social science, foreign language, 91 shops for metalworking, 328 for woodworking, 355 shooting ranges and to significantly increase the number of school and youth motion-picture theaters. Another 109 teaching-production combines will be opened, the number of school dining rooms will be reinforced with 265 places; schools will be additionally equipped with 43 medical stations and 64 dental rooms. In general, a large range of work will have to be completed. And this makes sense as on the first of September schools will take in 3,987,000 pupils.

In pedagogic educational institutions, automated rooms will be established with technical teaching resources with remote-control panels, preventoriums and much else. All this will contribute to further improvement of the teaching process and to stronger educational work.

The teachers are also preparing. The Uzbek SSR Ministry of Education approved the initiative of the socially active members of Bakhmal'skiy Rayon in Dzhizak Oblast, teaching collective of Samarkand Oblast Palace of Pioneers and School Children, Andizhan Oblast Station of Young Naturalists, Fergana Oblast Station of Young Technicians and Tashkent City Children's Excursion-Tourist Station as well as the socialist commitments of the Namangan State Pedagogic Institute imeni Niaz, Samarkand Pedagogic School imeni K.D. Ushinskiy and Fergana Institute for the Advanced Training of Teachers for exemplary preparation of educational institutions for the 1982-83 school year and the fulfillment of targets for all indicators.

Today deep study is going on among teacher collectives of the materials of the May 1982 Plenum of the CPSU Central Committee, which approved the country's food program. Schools, pedagogic educational institutions had previously taken an active part in adding to food resources. The plan for production of rabbit meat and turning over of their skins was fulfilled; auxiliary farms are being expanded for the production of meat, vegetables, fruits, melons and gourds and other types of products at pedagogic educational institutions, boarding schools, children's homes and extracurricular institutions. Subsidiary farms serve as a good support in the provision of food products for dining rooms and snack bars. In this regard, the example of Karshi Pedagogic Institute is noteworthy; it on its farm with an area of only 56 hectares produced in 1981 more than 25 tons of vegetables, melons and gourds, 10 tons of potatoes, 25 tons of fruits, 30 tons of alfalfa and 55 tons of corn (for silage).

The teachers of Uzbekistan have accepted the USSR Food Program as their own. In the course of preparation for the new school year, this question is being given serious attention. Concrete measures have been worked out for 1982 and for the future for all-out improvement of the operation of subsidiary farms and the organization of new, more effective use of land. Much remains to be done. The educational workers of Uzbekistan, inspired by the decisions of the May (1982) Plenum of the CPSU Central Committee and the 6th Congress of Teachers of Uzbekistan, are full of resolve to approach the beginning of the new 1982-83 school year in a well-prepared manner. This will be our labor present to the great celebration of the Soviet people—the 60th anniversary of the formation of the USSR.

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## EDUCATION

### DEMOGRAPHIC CHANGES CALL FOR NEW DIRECTION IN EDUCATION

#### Plans for Training Specialists

Moscow PLANOVYE KHOZYAYSTVO in Russian No 8, Aug 22 pp 95-100

[Article by A. Shuruyev, Gosplan USSR subdivision chief: "Problems of Planning the Training of Specialists for the National Economy"]

[Text] The 26th CPSU Congress approved the socioeconomic program for the country's development under the 11th Five-Year Plan and in the period through 1990. Fulfillment of this program is closely linked to the progress in science and technology, which sets new and higher requirements for the system of educating and training personnel.

Considerable successes have been achieved in this field in recent years. Secondary general education has become the minimal educational level for youths. In the period 1976-1980, 25.2 million boys and girls acquired such education.

For a long period of time, the growth of the training of specialists with higher and specialized secondary education lagged behind the demands of the national economy and of the cultural sphere. As a result, many of the positions requiring specialists were filled with practical experts. However, the measures adopted under recent five-year plans made it possible to radically change this situation.

During the years of the 10th Five-Year Plan, the influence of higher and specialized secondary educational institutions increased considerably on all aspects of the country's economic and social development. By the end of this five-year period, the annual number of graduating specialists exceeded 2.0 million. As L. I. Brezhnev noted at the 26th CPSU Congress, "the successes of the Soviet system of higher and specialized secondary education are well known. During the past five years alone, it gave our economy 10 million qualified specialists."<sup>1</sup>

Under the 10th Five-Year Plan, the economy's demand for specialists with higher education was supplied 92.7 to 97.8 percent, while the demand for specialists with specialized secondary education was fully met. Admittedly, there still are sectors and spheres of production that are experiencing a shortage of specialists, because the growth rates of the structure of training specialists do not always match the growth rates of social production.

Qualitative indicators of the higher and specialized secondary educational institutions' work improved noticeably during the past five-year period: the



students' pass rate rose; the number of young specialists graduating with good and excellent grades increased; and the students' dropout rate declined. The graduation of additional specialists was ensured, specifically for the sectors that determine technological progress, such as the power industry, electronics, transport and communications.

The physical plant of the higher and specialized secondary educational institutions was expanded considerably. In 1976-1980, 2.44 billion rubles was invested in its construction. During the five-year period, classroom and laboratory buildings with a floorspace of 3,388,000 square meters were commissioned at higher educational institutions, and 1,811,000 square meters at specialized secondary educational institutions. This permitted an improvement of working conditions: in 1980 the floorspace per student increased to 8.7 m<sup>2</sup>, and to 6.7 m<sup>2</sup> per tekhnikum student, from 8.2 and 6 m<sup>2</sup> in 1975. Under the 10th Five-Year Plan, 3.36 million square meters of dormitory facilities were built for students of higher educational institutions, and 2.28 million square meters for students of tekhnikums and training centers.

Within total social labor, a rising proportion of the labor of specialists with higher and specialized secondary education is characteristic of socialist society. According to the data of the All-Union population census of 1979, there were 14.8 million persons with higher education, and 23.5 million with specialized secondary education. In the period between the last two population censuses (in 1970 and 1979), the number of persons with higher education increased by 79 percent; and the number of persons with secondary education, by 75 percent. At the beginning of 1979, every seventh resident of the Soviet Union was a specialist holding a diploma. From 1940 to 1980, the total number of specialists employed in the national economy increased 12-fold, while the annual average employment in the economy only doubled.

In the age of the revolution in science and technology, the role of the engineering and technical personnel is increasing considerably. Their proportion within the total production and operating personnel in industry increased from 7.8 percent in 1940 to 10.5 percent in 1965 and 13.9 percent in 1980. The total number of engineering and technical personnel in industry was 5,133,000 in 1980. In comparison with 1975, employment in industry in 1980 was up 7.2 percent, and the engineering and technical personnel was higher by 19.7 percent.

In all branches of the Soviet economy jointly, the number of specialists holding diplomas is rising faster than the total number of persons employed as engineers, technicians and in managerial positions. Thus while from 1940 to 1980 the engineering and technical personnel increased 5-fold at industrial enterprises and 8.2-fold at construction organizations, the number of specialists with higher or specialized secondary education increased 23.3-fold at industrial enterprises and 47.2-fold at construction organizations. The faster growth of the number of specialists than of the engineering and technical personnel is explained by the fact that specialists gradually are replacing practical experts, i.e., persons assigned to engineering and technical positions who do not have specialized education, and also by the use of specialists directly at the work stations.

Graduates of higher and specialized secondary educational institutions account for a rising proportion of the total employment in the national economy. The number of specialists employed in the national economy was 2.4 million (3.8 percent of the total employment) in 1940; 16.8 million (15.8 percent) in 1970;

and 28.6 million (22.7 percent) in 1980, including 12.1 million specialists with higher education (9.6 percent) and 16.5 million with specialized secondary education (13.1 percent). Which means that nearly every fourth person engaged in social production holds a diploma from a higher educational institution or tekhnikum.

Whereas from 1960 to 1980 annual average employment in the national economy increased from 84.3 to 126 million, a gain of 41.7 million or 49.5 percent, the number of specialists gainfully employed increased from 8.8 to 28.6 million, a gain of 19.8 million or 125 percent. Under the 8th Five-Year Plan, specialists holding diplomas accounted for 42 percent of the increase in total employment; for 57 percent under the 9th and for 67 percent under the 10th Five-Year Plans. Thus, specialists accounted for more than one-half of the increase in total employment under the 8th and 9th Five-Year Plans, and for two-thirds under the 10th Five-Year Plan.

In the Soviet Union, the training of specialists with higher and specialized secondary education is planned in a complex manner. The national economic plans link the development of the training of specialists with the demands of the country's economic and social development, and also the development of the different levels and links in the system for the education and training of personnel.

To reinforce the creative nature of the specialists' work it is necessary to improve the quality of their training. The growth rates of the indicators that act in this direction (reinforcement of education's physical plant, construction of dormitory facilities, allocation of laboratory equipment for the higher educational institutions and tekhnikums, the training of faculties and the upgrading of their qualifications, etc.) must be determined in the national economic plans.

The basic question that must be answered in the course of planning the training of specialists is: how many specialists, where, and in what specialties should the higher and the specialized secondary educational institutions train during the plan period. At the same time, the significance of the quantitative and qualitative indicators of training specialists extends far beyond the current plan period. On the number of specialists trained and on the quality of their training will depend to a significant extent the progress of our society, and the rate of building communism. The plan-conforming expanded reproduction of specialists calls for training them in such numbers and in such quality (by fields of specialization and qualifications) that corresponds to the present state of socialist society's productive resources and production relations. It must ensure on the one hand the training of the necessary number of specialists (in an appropriate breakdown by the spheres and subdivisions of social production, by enterprises and by economic regions); and on the other hand, the utilization of the trained specialists in accordance with their education and qualifications.

The question of the quantitative relationship between the growth of production and the increase in the number of specialists, and the problem of their efficient utilization are assuming increasing importance at present in the training of specialists. A given level of technical development requires a certain number of specialists with the necessary qualifications to ensure the efficient utilization of the available production technology. When the number of specialists does not agree with the demand for them in the branches of the economy, there can be a shortage or a surplus of specialists.

Whereas earlier, when the demand for specialists was not fully supplied, the disproportions in their training by fields of specialization and economic regions were not significant, now when the demand for specialists is being supplied fairly adequately even small inaccuracies in planning can result in an oversupply of specialists in some fields and economic regions, and in shortages of specialists in other fields and other economic regions. Therefore one of the principal tasks in planning the training of specialists is to ensure the development of higher and specialized secondary educational institutions on a scale (jointly and by fields of specialization) such that meets the needs of the entire national economy, and the needs of each of its branches and regions as well.

One manifestation of the direct relationship between the economy and education under the present conditions is the need to bring the various parts of education in harmony with the structure of social production's demand for workers by every level of education, vocational training and qualifications. This task gives a clear overview of education as a unified system; of the close interrelations between the various levels of education; and of the need to set certain proportions and quantitative relationships between the various types of educational institutions and forms of instruction, in accordance with the needs of social production, with the financial possibilities of society, and with the ratios of the present forms of training qualified personnel. When planning the development of a given region's educational system, the following must be taken into consideration: the numbers of youths in the corresponding age groups; the long-term demand for personnel by levels of education; and the state and developmental possibilities of the educational institutions in the given region.

Taking the evolving demographic situation into consideration, the plan-conforming development of higher and specialized secondary education has been characterized by a narrowing of the potential sources of enrollment in the higher educational institutions, *tekhnikums* and training centers. Enrollment in the educational institutions depends first of all on the distribution of students completing the eighth and tenth grades of secondary school, which in its turn depends on the long-range demand for manpower with the corresponding level of qualifications, and on the number of students studying in secondary school. Since 1976, the number of students completing the eight-year school; and since 1978, also the number of students graduating from secondary day school, dropped each year.

Under the 11th and 12th Five-Year Plans, in conjunction with the declining number of youths becoming of work age, the total number of youths enrolling in educational institutions (full-time study in higher, specialized secondary, vocational and technical educational institutions), and of the ones joining the work force directly, will be significantly lower. As a result, difficulties might arise in reproducing the individual categories of manpower. To avoid these difficulties it is necessary to organize in a planned manner and on a scientific basis the expanded reproduction of manpower, with provisions to establish sound proportions for the reproduction of all categories of manpower in the country. In the course of this it is necessary to take into account the long-term development of the sectors of the national economy, and the complex demographic situation in the coming period.

However, the plans for the training of personnel with higher and specialized secondary education, and of skilled workers, are not being coordinated adequately. In the elaboration of the annual, five-year and long-range plans for the economic and social development of the Soviet Union, therefore, the training



of specialists and skilled workers will be planned in a complex manner, with due consideration for the manpower balance. In conjunction with this, Gosplan USSR has made provisions for the compilation of two complex balance estimates for 1981-1990, to be used in the elaboration of the state plan.

The complex balance estimate of attracting the students completing their general education, for training as workers and specialists in vocational and technical schools, and in specialized secondary and higher educational institutions (form No 24) will be elaborated by the councils of ministers of the Union republics. It will contain indicators for the distribution of the students completing the eighth and tenth grades of the day schools that provide general education, and for their enrollment as full-time students in educational institutions. The complex balance estimate of the demand for skilled workers, and for specialists with higher and specialized secondary education, and of the sources of their supply (form No 25) will be elaborated by the USSR ministries and other central agencies, and by the councils of ministers of the Union republics. It will include indicators of the number of workers, of the additional demand for skilled workers and specialists, and also the sources from which they will be supplied.

Elaboration of the mentioned complex balance estimates will help to establish substantiated proportions for the number of workers and of specialists with higher and specialized secondary education. This will permit the preparation of a unified sectoral balance of skilled personnel, at the level of a sector or ministry.

Provisions have been made to extend the complex system of planning the education and training of personnel under the current five-year plan. Beginning with 1982, the councils of ministers of the Union republics will ensure the drafting and adoption of unified annual plans for enrolling in the vocational-technical and technical schools, in the ninth grade of the general secondary schools, and in the specialized secondary and higher educational institutions the students who have completed the eighth and tenth (eleventh) grades respectively of the general secondary schools, in a breakdown by autonomous republics, krais, oblasts, okrugs, cities and rayons. At the same time it will be necessary to take into consideration the enterprises, construction projects and organizations' demand for skilled workers and specialists, and the need to fulfill the enrollment quotas of these educational institutions by the beginning of the school year.

Under the present conditions when the development of higher and secondary specialized education has attained a high level, the training of specialists must be planned on a scale that can fully supply the manpower needs of national economy's branches. To this end it is essential to estimate the number of graduating specialists each year so that the additional demand for specialists can be met. Therefore one of the basic tasks in planning the development of higher and specialized secondary education is to estimate the anticipated demand for specialists in all branches of the national economy and culture, in a breakdown by years, fields of specialization, groups of specialists, and Union republics.

The national economy's demand for specialists evolves in accordance with objective economic laws and is determined primarily by the requirements of the productive science and technology. It is closely linked to the future sectoral



structure of the economy, to the level of the production equipment and technology that will be provided for the period in question, to the planned sectoral productivity and capital-labor ratio, and to the level of work organization. Estimates of the demand for specialists are based on the indicators of the plans for the development of the economy and culture in general and by branches, on the commissioning of new enterprises and organizations and the expansion of existing ones, and on the labor plans. This ensures a close link between the plans for the development of the national economy and the plans for the development of higher and specialized secondary education.

To comprehensively coordinate the training of specialists with the interests of the national economy, with due consideration for the shifts and changes that are maturing in technology and the organization of production, and in the structure of the personnel's trades, jobs and functions, work is in progress to perfect the normative base and the determination of the manpower needs in the economy's branches. The 27 January 1978 Decree of the Council of Ministers USSR on Perfecting the Planning of the Training of Specialists and Improving the Utilization of the Graduates of Higher and Specialized Secondary Educational Institutions in the National Economy instructs the USSR ministries and other central agencies, and the councils of ministers in the Union republics, to elaborate and approve--in agreement with Gosplan USSR, the USSR State Committee for Labor and Social Problems, and the USSR Ministry of Higher and Specialized Secondary Education--sectoral methodological instructions for determining the demand for specialists, and also scientifically substantiated norms for the saturation of the economy's branches with specialists. In addition, they must complete and approve--in agreement with the USSR State Committee for Labor and Social Problems--the standard lists of jobs that must be filled by specialists with higher and specialized secondary education, with special attention to setting more appropriate ratios of the engineering and technical personnel, in accordance with the specific conditions of each sector.

The USSR Ministry of Higher and Specialized Secondary Education has approved the Uniform Requirements for the Elaboration of Departmental (Sectoral) Methodological Instructions on Determining the Demand for Specialists, and it prepared the Methodological Instructions on Elaborating Norms for the Saturation of the Economy's Branches With Specialists. The 215 All-Union, Union republic, and republic ministries and other central agencies are now working on refining the methodological instructions on determining the demand for specialists.

Sensible combination of the sectoral and territorial aspects of planning is gaining ever greater importance in organizing the training of specialists. At present every economic region, and many autonomous republics, krais and oblasts have scores of higher and specialized secondary educational institutions subordinate to Union, Union republic and republic ministries and other central agencies. The plans for the training of specialists in the higher and specialized secondary educational institutions and training centers often are set independently of one another, without taking into account the demand for specialists on the given territory, the local demographic situation, the capacities of the construction organizations, etc. As a result, there arise disproportions in the training of specialists, their cross transfers and other unwarranted moves. Refusals by the specialists to go to where they have been assigned, their high turnover and low retention rate are frequent. Many of these shortcomings could be eliminated through the necessary territorial coordination of the young specialists' place of residence, place of study, and place of assignment. Such

territorial coordination would be enhanced if the individual ministries and other central agencies were to take into account the territorial breakdown (within Union republics) of the demand for specialist with higher and specialized secondary education.

Measures are being adopted lately to strengthen the relationship between the sectoral and territorial breakdowns of the plan. In the forms and indicators of the 11th Five-Year Plan there are provisions to ensure that, as of 1981, the estimates of the demand for specialists with higher and specialized secondary education, and the elaboration of the plan for their training are prepared by the USSR and RSFSR ministries and other central agencies, for the economic regions of the RSFSR. There are also measures to strengthen the coordination of the branch ministries' activity with that of the local soviet organs on whose territory the ministries are maintaining higher and specialized secondary educational institutions. The local soviet organs are increasingly generalizing, evaluating and correcting (after taking into account the youth resources on the given territory, the region's demand for specialists, and other local conditions) the plan indicators for developing the training of specialists in all the higher and specialized secondary educational institutions that the various ministries maintain in the given region. The purpose is to supply the demand of the region's economy for specialists especially in common fields of specialization, primarily by training them in the higher and specialized secondary educational institutions in the region.

Thus the strengthening of the territorial breakdown in planning the training of specialists makes it possible to coordinate the present and future manpower resources of the region with the plans for the development of the sectors, to ensure the necessary structure of skilled personnel, to gear the quotas for the training of specialists at the higher educational institutions and tekhnikums to the evolving demographic situation, and to bring the locations where the specialists are being trained closer to the locations where they will be assigned.

At the 26th party congress the need was emphasized to complete in the 1980's the economy's changeover predominantly to the intensive path of development. The requirements set by the party apply also to the activity of the institutions that train personnel. In the 1980's it will be necessary to develop intensively also higher and specialized secondary education, in the same way as the other sectors of the national economy.

The task set for the system of higher and specialized secondary education--to achieve the best possible final results at the relatively lowest expenditure of material, manpower and financial resources--requires from the faculties and other personnel of the higher and specialized secondary educational institutions further scientific and practical investigations into all areas of the educational institutions' activity, to uncover and utilize additional internal resources for raising the effectiveness and improving the quality of their work.

In his report to the 26th party congress, L. I. Brezhnev noted that within the system of higher and specialized secondary education there was much room for improvement. "Parallel with the development of the national economy, also the demand for personnel in the various fields of specialization is changing. Consequently, also the system of planning the training of personnel at the higher educational institutions must respond quickly to these changes."<sup>2</sup>

The directions for perfecting the activity of the higher educational institutions and tekhnikums are very diverse: improvement of educational and training work, reduction of the students' dropout rate; an increase of the proportion of

part-time students; closer attention to the goal-oriented training of specialists; and the creation of conditions for the better distribution of graduates and for their retention in production.

Under the 11th Five-Year Plan, the principal task in the training of specialists remains the planned supply of the demand for specialists in the sectors of the economy, and also the guaranteeing of jobs for graduates in accordance with the training they received at the educational institutions. At the same time, the quality of the specialists' training and the level of their civic awareness must meet present-day requirements. First and foremost is the need to improve the quality of the specialists' training at an accelerated rate. And this requires the perfection of the educational process, curricula and programs; the technical reequipping of the educational process; and the more complete supply of the necessary instruments, equipment, electronic computers and other technical instruction aids.

The optimal structure of the system for training specialists must be ensured under the current five-year plan: in terms of the level of qualifications (higher and specialized secondary education; of the fields of specialization and their groups; of the forms of instruction (full-time study, night school, correspondence course); and by Union republic and economic regions. Efforts will continue to liquidate the uncovered and potential disproportions of the training of specialists in the individual fields of specialization, and to organize and expand their training in accordance with the advances in science and technology. The training of specialists in fields in which there are shortages will be expanded so as to fully supply the demand of the national economy. At the same time, the training of specialists in the fields of specialization in which there is an oversupply of specialists will be curtailed more forcefully.

The evolving demographic situation limits to a certain extent the possibility of expanding the network of higher and specialized secondary educational institutions. An absolute growth of higher and specialized secondary education acquired through full-time study could be achieved only by reducing the number of young people directed to vocational and technical schools and directly to production; i.e., by significantly reducing their influx at work places. Therefore the scale on which young people are to be diverted from the sphere of production to the sphere of higher and specialized secondary education must be analyzed carefully, with due consideration for the demographic conditions in the specific Union republic or economic region.

Under the 11th Five-Year Plan there are provisions to stabilize enrollment in the higher educational institutions and tekhnikums. The 1985 enrollment will be 100.4 percent of the 1980 enrollment in higher educational institutions; and 103.3 percent in the tekhnikums. Here the indicators of enrollment for the individual years of the five-year period are differentiated for the councils of ministers of the individual Union republic and for the individual USSR ministries and other central agencies, in terms of volume and also by the forms of study.

A more sensible territorial distribution of the training of specialists is being ensured. Within the stabilized total admission for the country as a whole, there are provisions to increase admission to the higher educational institutions by 18.5 percent in the Uzbek SSR, 5.3 percent in the Kazakh SSR, 4.6



percent in the Georgian SSR, 4 percent in the Kirghiz SSR, and 3.5 percent in the Turkmen SSR. Admission to the tekhnikums and training centers will increase by 24.7 percent in the Uzbek SSR, 17.3 percent in the Turkmen SSR, 10.4 percent in the Kazakh SSR, 10.1 percent in the Ukrainian SSR, 8 percent in the Armenian SSR, and 6.3 percent in the Kirghiz SSR.

There will be changes also in the proportions of the individual forms of study within the total training of specialists. Admission to extension studies will increase by 9.2 percent in the higher educational institutions, and by 6.5 percent in the tekhnikums. The training of specialists will increase in the regions of Siberia and the Far East, where the productive resources are being developed intensively.

The task has been set of increasing the output of specialists by reducing the students' dropout rate. The plans call graduating 10.5 million specialists under the 11th Five-Year Plan, and increase of 2.9 percent over the 10th Five-Year Plan at the higher educational institutions, and 5 percent at the tekhnikums. Here it should be borne in mind that under the 10th Five-Year Plan 1,085,000 students dropped out from higher education institutions, and 1,189,000 from tekhnikums.

An important aspect of raising the effectiveness of training specialists under the present conditions is the reinforcement of those sections and branches of the training process that require the joint efforts of the educational institutions and of production. This applies first of all to the production experience of the students, to the probationary period for graduates of higher educational institutions, and to the establishment (on a voluntary basis) of teaching, scientific and production associations. The strengthening of ties between teaching and production should enhance the goal-oriented training of personnel, with due consideration of the demand for the graduates of higher educational institutions and tekhnikums, and of their individual faculties and departments, by fields of specialization.

The problem of effectively assigning, retaining and utilizing personnel in the national economy is becoming more and more timely. By no means all specialists trained at higher and specialized secondary educational institutions are working successfully in their own fields and where society needs them. In 1980, for example, 238,300 young specialists or 17.6 percent of the graduates who had studied full time at higher educational institutions and tekhnikums were assigned work not in accordance with the plan for their distribution, and many of them had been without jobs for longer periods of time. As a result, even though the plan for graduating specialists was overfulfilled, the plan for their distribution was not.

Perfection of planning the training of specialists plays a prominent role in the solution of the mentioned problems. As noted in the Decree of the CPSU Central Committee on the 60th Anniversary of the Founding of the Union of Soviet Socialist Republics, "it is important to further improve the planning and the quality of the training of specialists; to take more accurately into consideration in their distribution the needs of the republics and of the Soviet Union as a whole; and to utilize more fully their creative potential in the interest of building communism."<sup>3</sup> Solution of this task depends on the quality of drafting the plans for the social and economic development of our society, and on the completeness of their fulfillment.



#### Footnotes

1. "Materialy XXVI s"yezda KPSS" (Proceedings of the 26th CPSU Congress), Moscow, Politizdat, 1981, p 60.
2. Ibid, p 60.
3. PRAVDA, 21 Feb 1982.

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#### Manpower Resources and Education

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 8, Aug 82 pp 101-104

[Article by I. Bolotin, candidate of philosophical sciences, and V. Chizhov: "Manpower Resources and the Educational System"]

[Text] Under developed socialism, education has immense influence on the solution of the tasks of building communism. It contributes to the acceleration of scientific and technological progress, and thereby to raising the productivity of labor and to the development of social production. Emphasizing the decisive importance of the rise of labor productivity for the victory and consolidation of socialist social relations, V. I. Lenin linked it to the rise of the population's educational level. At the same time, also the development of education influences society's social structure and helps to overcome the differences between town and village, between intellectual and physical labor.

The party and government are devoting close attention to the perfection of education. The changeover to compulsory secondary education has been completed. During the past five years, the system of higher and specialized secondary education gave the economy 10 million qualified specialists. In his report to the 26th CPSU Congress, L. I. Brezhnev noted: "At the same time, there is much in this system that can and must be improved. I have in mind first of all the quality of instruction, and the strengthening of relations with production."<sup>1</sup>

The present stage of the development of the revolution in science and technology sets new tasks for the educational system. One of the basic requirements is to raise the educational level of the entire population, which is fully in agreement with the period of a socialist society.

Since secondary education is becoming general, in allocating youths among the general, vocational and specialized educational institutions the increase of enrollment in one branch means a reduction of enrollment in the other branches. An important problem of socioeconomic development in a territorial breakdown (by republics, oblasts, cities and rayons) is the preparation of annual and long-range plans for enrolling in further study the students completing the eighth grade of the vocational and specialized secondary schools, and the ninth grade of the general schools. Here the need must be taken into account to provide complete secondary education for every student, and to supply the given region's demand for workers and specialists. Such complex planning of the training of personnel is particularly important in places where a tight demographic situation has developed (the regions of the RSFSR, the Baltic region, the

Ukrainian SSR, Belorussian SSR, etc.). The drafting of plan balances for the distribution of the students completing the eighth grade makes it possible to overcome the departmental approach to filling the various types of schools.

Changes of a quantitative and qualitative nature are taking place in the educational system: on the one hand, new elements are appearing in it; and on the other, the interdependence of the elements is increasing. Among the new elements we may include the recently established secondary vocational-technical schools, which have already proven viable, and the system that is now being formed for the vocational guidance and selection of youths. The substantial increase lately in the number of vocational-technical and technical school graduates allowed to enroll in higher educational institutions can serve as an indicator of the interdependence of the educational system's elements.

The need to closely interlink all the elements of the educational system, and the general and vocational-technical schools in particular, is being recognized increasingly. In 1979, at a joint collegium of the USSR Ministry of Education and of the USSR State Committee for Vocational and Technical Education it was decided to direct the vocational-technical educational institutions to intensify their vocational guidance work in the general schools.

At the same time, the functions of the educational system are being broadened and redefined. It is becoming a source of not only training, but of manpower distribution as well.

Education's enhanced role and influence on all aspects of society's life are evident in that the planning organs have included the indicators of general, vocational and specialized education in the long-range and current plans of economic and social development. This applies first of all to the plans for the social development of the enterprise collectives. At other levels of planning, these indicators are used to a lesser extent. As already noted in the press, this explained to a considerable extent the fact that the planning organs regard education as consisting of "subsectors" that must be planned separately (and not as a unified system for the entire country).<sup>2</sup> By the very logic of the development of the economy and of education, the planning organs are forced to set scientifically substantiated proportions for the students of the general, vocational and specialized schools (taking into consideration full-time study, night school, and correspondence courses).

Two basic approaches to planning education can be distinguished: either start out from the evolving trends, or focus on the attainment of certain ultimate objectives. In the first case it is assumed that the educational system will continue to develop in the same way as in the past (various methods of forecasting and extrapolation are employed). The advantages of this method are the relative simplicity of the computations, and the ease of interpreting the obtained results. Systematic use of this method, however, makes planning conservative and often leads to erroneous results, especially in long-range forecasting. In the second case, the national economy's demand for manpower, in specified fields of specialization and with specific skills, is estimated for the period covered by the plan.

It is essential to regard education as a single branch of the national economy also because the number of boys and girls becoming of work age has dropped as a result of the country's declining birthrate. At the 26th CPSU Congress,

L. I. Brezhnev listed the slower growth of manpower resources as first among the factors that are complicating the country's economic development in the 1980's.

At present, 94 percent of the manpower resources are employed in the economy or engaged in full-time study, which means that there are practically no manpower reserves. The age structure of the work force is such that at the end of the 1970's people who had become of work age before and during the war were reaching retirement age in large numbers. The younger generation of workers and specialists replacing them have a significantly higher level of education and are able to undertake more complex types of work. The replacements are not simply young but specifically new, oriented on the qualitative changes at the workplace, particularly on a higher ratio of capital equipment to labor. Therefore the planning of manpower resources must be accompanied by planning the perfection of production.

Thus the change of generations with the manpower resources is not merely a quantitative problem but a qualitative one as well. Dissatisfaction with the duties involved and with the availability of machinery per worker can lead to unnecessary migration of labor, which is undesirable economically as well as socially.

The replenishment of manpower resources will decline in the coming period, due to the lower proportion of children within the population's age structure. This is caused by the decline of the birthrate and of the number of births in recent years. Thus the number of births per 1000 population was 24.9 in 1960, but only 18.3 in 1980. The average indicator of population growth varies considerably by republics (in Central Asia, for example, it is nearly three times higher than the All-Union average). This factor determines the specific nature of the tasks in conjunction with the educational system's development in the republics with different birthrates.

Due to the declining birthrate, the number of students in daytime general schools is now declining, as evident from the following table. In the 1980/1981 school year, enrollment in these schools was lower than in any year during the past two five-year periods, and lower by 5.9 million than the 1970/1971 record enrollment in the history of Soviet secondary education. Especially striking is the noticeable decline in the number of students in the fourth through eighth grades. In the 1970/1971 schools year, enrollment in these grades was 25.1 million, but only 20.1 million in the 1980/1981 school year, which gives an average annual drop of 0.5 million students. For the system of vocational education, the consequences of this negative trend will be felt in their full impact after the 10th Five-Year Plan.

Table 1. Number of Students Enrolled at the Beginning of the School Year in Daytime General Schools, by Groups of Grades (million students)

	1970/1971	School year 1975/1976	1980/1981
Total enrollment	45.4	42.6	39.5
Of which: Grades 1-3	15.2	12.6	13.6
Grades 4-8	25.1	23.4	20.1
Grades 9-10 (11)	4.8	6.2	5.3

One characteristic feature of the development of present-day education is its increasing role in population migration. The shortage of the necessary educational institutions in rural areas compels students or their families to move to cities. This process is peculiar to regions with low population densities. Consequently, the construction of general and vocational schools can be a means of retaining manpower in rural areas and it also can solve a number of social problems. In our opinion, it will be expedient to undertake such construction, on the basis of the settlement plans.

Under the 8th-10th Five-Year Plans, the problem of fulfilling the enrollment quotas for the various types of secondary schools did not pose any special difficulties (except in a number of industrial centers), due to the increase in the number of students. Under the 11th-12th Five-Year Plans, however, this problem will intensify considerably, due to fewer students completing the eighth grade. Therefore it has become especially timely to develop a uniform concept of planning policy in education for 1990 and the year 2000. Forecasting the distribution of young people among the various branches of education during the next 15 to 20 years has gained particular importance.

Opinions differ on how to differentiate secondary education in the coming years. Some propose increasing the enrollment of students completing the eighth grade of general school in the vocational-technical secondary schools, with a corresponding reduction of their enrollment in the ninth grade of the general school and in the specialized secondary schools. Others favor leaving unchanged (at the 60-percent level) the proportion of eighth-graders enrolled in the ninth grade of secondary school, and increasing their enrollment in the vocational-technical secondary schools, at the expense of a gradual reduction of enrollment in the specialized secondary schools, complementing the enrollment quotas of the latter with students completing the 10th grade.

Here we must bear in mind that conversion of the vocational-technical schools into the principal type of secondary educational institutions should not reduce the general educational level of young people; instead, the new type of secondary education requires an optimal combination of theoretical, practical and political instruction. And we must also bear in mind that stabilization of the number of students leaving general school will increase their proportion studying in vocational-technical secondary schools. At present this proportion is nearly 40 percent of the students completing the eighth grade, and even higher in the industrially developed regions.

The vocational-technical secondary schools are becoming popular among young people, because here the students not only learn a specialty but also acquire secondary education. The number of students graduating from such schools rose from 205,000 in 1976 to 447,000 in 1978, a 2.2-fold increase.

The technical schools have been developing rapidly in recent years. Admission to these schools in 1975-1980 increased from 353,000 to 735,000, or more than twofold. At the same time, the number of students entering specialized secondary educational institutions upon completing the tenth grade increased from 750,000 to 897,000. Total admission to specialized secondary schools increased from 1,404,000 in 1975 to 1,457,000 in 1980. Admission of students leaving the eighth grade to tekhnikums dropped from 652,000 in 1975 to 504,900 in 1980.



Enrollment in higher educational institutions increased insignificantly. First-year enrollment was 994,000 in 1975 and 1,051,000 in 1980, an increase of 57,000. Higher educational institutions are being developed basically in the direction of qualitative improvement in the training of specialists, of bringing the list of specialties closer to the requirements of the national economy, and of an expansion of training in the most promising fields of specialization, in accordance with the advances in science and technology.

The system of vocational-technical education is developing much faster. This is due to the requirements of the revolution taking place in science and technology. The replacements for the working class now must not only have a basic knowledge of science, but must also be trained in their chosen fields of specialization. At the 1971 All-Union Rally of Students, L. I. Brezhnev said: "What many blue-collar workers are doing at the plants today was considered permissible only for engineers and technicians not so long ago."<sup>3</sup>

The present level of national economic planning requires better forms of organizational, methodological and substantive links among the elements of the educational system. On the unity of these forms depends to a considerable extent the solution of many tasks, including the improvement of the quality of education.

For admission to higher educational institutions, the best prepared are the graduates of the general secondary schools. Persons with specialized secondary education, and the graduates of the vocational-technical secondary schools have less chance of passing the entrance examinations to higher educational institutions and, once admitted, they are forced to study the entire curriculum intended for graduates of the general secondary schools. Obviously, the general-educational and vocational nature of the training given to the new enrollment in the higher educational institutions must be taken into account, and the process of education and training must be perfected accordingly. In forming the structure of the students admitted to the vocational-technical schools, very important is the fact that the graduates of these schools have wide opportunity to continue their studies at universities, institutes and tekhnikums (either as full-time or part-time students). In the sphere of higher education, in our opinion, this perfection can be accomplished in two ways. Either by shortening the curriculum in accordance with the type of education prior to admission. Or by offering special programs, reflected in the diplomas, to students who are graduates of vocational-technical schools, technical educational institutions and tekhnikums.

The principal direction for eliminating the encountered contradictions should include the following: strengthening the unity of all elements of the educational system; ensuring the succession of the different levels of education; and the elimination of the existing inconsistencies and complex situations when changing from one level of education to another. This perfection of the educational system will help to raise the population's educational level and will meet the requirements of the national economy. It will allow an acceleration of the training of workers and specialists, which is very important when there are manpower shortages.

For the distribution of young people among the various branches of vocational and specialized education and training, it is necessary to establish a state

system of vocational guidance, which at present is being provided in a fragmented manner, by a variety of organizations and departments (schools, radio, television, enterprises, etc.). The absence of a single organizing and coordinating center leads to a duplication of effort, to contradictions and other shortcomings in the work of the many different organizations. And yet this work is not without its results. During the past decade there has been a noticeable trend to bring the national economy's demand for skilled workers and specialists closer to the population's orientation on the corresponding educational levels and forms of education. A survey of the young people's orientation conducted in the 1960's established that 80 to 90 percent of the tenth-grade students intended to continue their studies at higher educational institutions. The proportion of students who wanted to acquire specialized secondary education was small.

Regional surveys conducted in the mid-1970's revealed a high regard for higher education, but there were significant changes in its structure. Thus, only about 50 percent of the respondents expressed a desire to study at a higher educational institution, while the number wishing to enroll in a specialized secondary or technical educational institution increased.<sup>4</sup> This is confirmed by the drop in the number of applicants taking the entrance examinations to higher educational institutions. For every 100 vacancies there were 290 applicants in 1966, but only 230 in 1976, despite the increase in the number of secondary-school graduates. The shifts in the structure of the students' orientation can be attributed to the changes in the nature and content of the work performed by blue-collar workers and kolkhoz members, to the improvement of their material well-being, and to the expansion of the network of secondary educational institutions.

So far as the development of the general schools is concerned, we believe that here it is essential to spread more widely the favorable phenomena observed in recent years: to reduce the number of small primary and eight-year schools, while expanding the network of general secondary schools; to locate more general secondary schools in rural areas, with due consideration for the future growth of rural localities; and to expand the network of extended-day schools and boarding schools.

The material and technical base of the general secondary and vocational-technical educational institutions require improvement. Considerable opportunities for bringing the general and vocational schools closer to each other lie particularly in the practical training of upper-grade students in the shops of the vocational-technical schools. The development of new forms of training skilled workers--educational forms and educational-course combinations--makes it possible to establish closer ties between vocational-technical schools and production, in terms of organization, education and practical training, and methods. This in its turn enables young people to learn blue-collar trades.

In training specialists with higher and specialized secondary education, and in supplying the economy's demand for such personnel, there are long-term possibilities for a changeover to a system of education in stages. Under such a system, a number of specialized secondary educational institutions could be converted into vocational-technical schools or into educational institutions of a higher type, which would be the initial stage of the higher educational institutions. Technical higher educational institutions with five- to six-year

curricula could train research engineers; and in shorter (four-year) curricula, technologists, operating engineers and production engineers.

Such a restructuring of the system for training specialists with higher and specialized secondary education will offer continuous education for young people, wider opportunity to choose the educational institution, the type of training and field of specialization, and to transfer to other educational institutions. In this way the students' dropout rate will decline. As a result, the role of the country's educational institutions will rise, and so will the population's intellectual level. Such a rise is a law-conforming process in the present stage of building communism.

#### Footnotes

1. "Materialy XXVI s"yezda KPSS" (Proceedings of the 26th CPSU Congress), Moscow, Politizdat, 1981, p 60.
2. PRAVDA, 22 June 1979.
3. L. I. Brezhnev, "Leninskim kursom" (Along Lenin's Course), Moscow, Politizdat, Vol 3, 1973, p 424.
4. Cf. VESTNIK VYSSHEY SHKOLY, No 3, 1977, p 15.

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1014

CSO: 1828/179

## EDUCATION

### EXPANSION OF PRESCHOOL FACILITIES LAGGING

Moscow IZVESTIYA in Russian 28 Jun 82 p 2

[Article by Yu. Khrenov: "The Best for the Children"]

[Text] Many people know this story: When Hewlett Johnson, a teacher in Canterbury Cathedral, returned to Great Britain from a visit through our country, he was asked: "And are there privileged classes in the USSR?" He replied: "Yes, there is one such class, the children."

The 26th CPSU Congress outlined a broad set of measures to further improve the life of the young generation, and a particularly important place was given in it to development of the network of children's preschool institutions. The decisions of the congress and decrees adopted in recent years by the CPSU Central Committee and USSR Council of Ministers envisage achievement of a situation where every Soviet family will be able to take advantage of the services of children's institutions.

The state plan for the country's economic and social development over the period 1981-1985 has set the assignment of building children's nursery schools and creches to accommodate 2.9 million from all sources of financing. It is especially important that a sizable portion of this--1,182,000 places, as envisaged by the USSR Food Program approved by the May (1982) Plenum of the CPSU Central Committee, is scheduled for rural areas.

How successfully are the decisions which have been taken being carried out in practice? The commissions for maternity, child development and women's work in the Council of the Union and Council of the Nationalities of the USSR Supreme Soviet devoted a joint session to discussion of this problem in view of its extreme importance. The session was chaired by the commission chairwomen L. P. Pakhova and L. P. Lykova. V. Gusev, director of the deputy training commission, delivered a report.

Before the discussion the deputies who are members of the commissions studied the state of affairs at the local level and also materials submitted by USSR Gosplan, USSR People's Control Committee, a number of ministries and departments, and councils of ministers of union republics. M. A. Prokof'yev, USSR Minister of education, and S. P. Burenkov, USSR minister of health, presented statements at the meeting.



Note was taken that under the supervision of party authorities and with the vigorous aid of soviets of people's deputies and public organizations considerable work has been done in the country to expand the network of preschool institutions, to strengthen their plant and equipment and to improve the training of preschool children. At the present time the USSR has 130,000 permanent state and kolkhoz kindergartens and children's nurseries in which about 15 million children are being trained. In addition, in the summertime more than 1 million small children in rural localities are served by seasonal institutions. Every year larger appropriations are made to operate and to build nursery schools and day nurseries.

Of all the construction ministries in 1981 only Mintransstroy [Ministry of Transport Construction] fulfilled the plan for completion of these facilities. USSR Minneftegazstroy [Ministry of Construction of Petroleum and Gas Industry Enterprises], for example, completed only 3 kindergartens with a capacity of 430 instead of the planned 15 kindergartens with a capacity of 1,840 for USSR Mingazprom [Ministry of Gas Industry]. That same ministry failed to deliver nursery schools with a capacity of 2,405 for USSR Minnefteprom [Ministry of Petroleum Industry]. In the West Siberian Economic Region facilities were activated in 1981 with a capacity of 23,000 instead of the planned 36,000.

Progress in building nursery schools and day nurseries has been especially unsatisfactory in rural areas. Last year the plan for completing those financed by kolkhozes was fulfilled at only 85 percent. USSR Minzel'stroy [Ministry of Rural Construction] was alone short a capacity of 4,500. The practice has not yet been abandoned of planning the principal projects under the heading of preschool institutions for the end of the year. There are cases when children's institutions are accepted for use though much work remains to be done.

One of the reasons for this is that executive committees of local soviets are not taking full advantage of their supervisory powers, are not imposing the necessary exactingness on fulfillment of construction plans and on activation of nursery schools and day nurseries.

Given the strain on the manpower balance in the country, the inadequacy of capacity of preschool institutions is having an adverse effect on the activity of enterprises and organizations. A large number of women are for this reason unable to work in social production.

The country has accumulated very great experience in building nursery schools and day nurseries which meet the highest standards that can be set for facilities of this kind. There are nursery schools and day nurseries of this kind, equipped with everything necessary for normal physical and mental development of the children, in all our republics and oblasts, in industrial centers and in rural areas. Children's multiple-service institutions in Naberezhnyye Chelny and Togliatti, in Riga and in Lobnya, a city near Moscow, are, for example, well known for their beauty and for how well they are equipped. Architects in the USSR have now developed more than 200 standard designs for construction of children's preschool institutions. They take into account both the climatic peculiarities of various zones and the capabilities of the local construction industry and many other things. That is why it is particularly

abnormal, the deputies noted, for outdated designs to still be in use for nursery schools and day nurseries in a number of cases.

The discussion covered improvement of plant and equipment, specifically improvement of the supply of furniture to preschool institutions and also furnishings, floor coverings, dishware, refrigeration equipment and other equipment. It is not uncommon for the opening of newly built nursery schools and day nurseries to be held up because of their absence.

The deputies paid particular attention to improvement of food service to the children, their medical service, the organization of regular preventive screening, improvement of recuperative and training work with the children, and development of a system of cottages for rest and recreation outside city.

Given the intensive growth of the network of preschool institutions, the problem of a better staffing of these institutions with specialists is becoming particularly acute. This especially applies to kolkhoz nursery schools and day nurseries. In many of them, by contrast with state preschool institutions, staff members do not have a firmly fixed wage.

The deputies expressed an understanding of the need for universal retention of 100 percent of the old-age pension for retired preschool teachers while they are still working as a temporary measure to satisfy more fully the need for pedagogic personnel.

The following deputies participated in discussion of the topic: Sh. M. Aliyev, first secretary of the Sumgait Gorkom of the Azerbaijan CP; R. M. Malkhozov, chairman of the Kolkhoz imeni Lenin in Adyge-Khabl'skiy Rayon in Karachayevo-Cherkess Autonomous Oblast; A. A. Mekhrentsev, chairman of the ispolkom of the Sverdlovsk Oblast Soviet of People's Deputies; and others.

G. A. Arendt, USSR deputy minister of construction of petroleum and gas industry enterprises; A. P. Parfenkov, USSR deputy minister of construction; A. I. Iyevlev, USSR deputy minister of agriculture; and N. A. Trofimuk, chief of the AUCCTU department for state social insurance, spoke during the session of the commissions.

The commissions outlined specific recommendations to correct the shortcomings discovered. Their joint session was attended by B. Yazkuliyeu, deputy chairman of the Presidium of the BSSR Supreme Soviet; V. P. Ruben, chairman of the Council of Nationalities of the USSR Supreme Soviet; and heads of ministries, state committees, USSR departments and public organizations.

7045

CSO: 1828/163

## DEMOGRAPHY

### DEMOGRAPHIC TRENDS OF YOUNG FAMILIES EXPLORED

Kiev EKONOMIKA SOVETSKOY UKRAINY in Russian No 4, Apr 82 pp 27-32

/Article by T. Mashika, senior lecturer and candidate of economic sciences, Uzhgorod; "Social-Economic Factors in the Demographic Behavior of Young Families"7

/Text/ "Basic Directions in the Economic and Social Development of the USSR in 1981-1985 and the Period up to 1990" calls for the implementation of a system of measures to expand the privileges and benefits granted to families with children and to working mothers. These measures are aimed at increasing the incomes of families with children; at improving their housing and daily living conditions, especially for young families; at improving further the network of children's preschool facilities to make it possible for every family to use these services; at increasing the free time of working mothers and at creating better conditions for child raising.

The Communist Party and the Soviet government do a great deal to ensure that Soviet women are able to successfully combine labor in the public production sphere and motherhood. Nonetheless, difficulties in combining the duties of a mother and active participation in production and public life still exist and frequently lead to discrepancies between maternal duties and work activities for a woman, between the possibility of having a certain number of children in the family and the development of the woman's personality, between the level to which material needs are satisfied and the birth, maintenance and upbringing of children in the family.

In 1975 we used a questionnaire to survey young married women working at four light industry enterprises in Trans-Carpathian Oblast: we asked about the number of children they wished to have in their families and the factors which influenced their demographic behavior. The survey encompassed 1,890 women aged 18-35 years of age who had general and specialized secondary education. At the time of the investigation 49 percent of the women did not have children, 37 percent had one child and 14 percent had two children. According to the results of the investigation, 39 percent of the married women whom we questioned wanted to have one child, 46 percent wanted two, 9 percent wanted three or more and 6 percent wanted none.

According to data from a large-scale questionnaire survey of blue- and white-collar working women throughout our country (33,600 women), which was conducted by the Demography Laboratory of the Scientific-Research Institute of the Central Statistical Administration, 15.4 percent of those questioned want one child, 52.6 percent want two children, 19.5 percent want three children, 11.5 percent want four and 1 percent wants none.<sup>1</sup> A similar survey was taken in 60 countries of the world, including all the socialist states. The data from the studies were similar to that which was obtained in our country.<sup>2</sup>

An orientation towards a one- or two-child family does not provide for even simple reproduction of the population. If the majority of families are limited to one or two children, the generation of the children will be smaller than the generation of the parents. According to the calculations of B. Urlanis, there must be 258 children for every 100 married couples for simple replacement of the parents. Three hundred children for every 100 married couples are necessary to provide for a small increase in the population.<sup>3</sup> Consequently, a family should have no fewer than three children.

The population is aging. As this aging process takes place, the number of dependants grows, and the number of workers becomes proportionally less. Despite the successes of the scientific-technical revolution and the growth of labor productivity, the problem of labor resources is becoming more acute. It is not only society but also the family which is interested in increasing the number of children in the family. Concern for the fate of an only child accompanies parents throughout life; the first-born child is frequently weaker than the second or third child, and he is deprived of those very important emotional ties which unite brothers and sisters. If a child is alone with his father and mother, he involuntarily concentrates on himself all their parental attention, and he frequently grows up with the habit of making excessively high demands on those around him. A childless family with several children instills collectivism, friendship, responsibility and discipline among all of its members. It collapses far less frequently than a family with one child; in this kind of family the father participates much more actively in its life, in the care of the children and their upbringing.

The demographic behavior of a family is influenced by economic, social, political, ethical, legal, socio-psychological, ecological and many other factors. An analysis of the demographic situation and the development of demographic policy measures proceeds from the study of the interrelations between demographic changes and the processes of socio-economic development. In the final analysis demographic changes are determined by socio-economic factors. They include factors such as women's participation in public production, housing conditions, the development of the public sectors and services for the population, the availability of children's facilities and others. For example, in the opinion of the women whom we questioned, the limitation on the number of children in the family is frequently caused by the difficulties of combining child raising and work in public production, by the lack of adequate living space for large families, by the lack of places in children's institutions, by



the limited nature of the family budget and others. These data are in line with the results of other studies which have been conducted in our country.

After analyzing the data from a complete statistical accounting and the materials from numerous selective studies, we are not inclined to explain the reduction in our nation's birthrate in any simple way. The dynamics of the birthrate are influenced by a number of social and economic factors which are closely related; their effect depends on specific socio-economic conditions. "The same factor," notes A.G. Volkov, "may act differently under different conditions; moreover, the demographic development of the family is under the influence not only of today's conditions but also to a significant degree of yesterday's, as well as the prospects for future social and economic development, although the latter applies to a lesser degree. And finally, the conditions themselves change."<sup>4</sup>

At the present time women comprise 51 percent of the total number of blue- and white-collar workers in the nation, 59 percent of the specialists with higher and specialized secondary education, and in local and higher organs of authority their share ranges from 31 to 49 percent.<sup>5</sup> In our country there is no sphere of public life to which women could not make their contribution.

However, while participating in public labor, every woman who decides whether to give birth to a child faces a choice: either to satisfy her natural need for children through a definite reduction in the level of public activities (with all the resulting consequences) or to decide not to have another child. Frequently she chooses the second alternative. An increase in the level of women's employment in public production and a reduction in the birthrate are directly related. For example, the years in which the greatest numbers of women were attracted to public production (1960-1965) were accompanied by a significant reduction in the birthrate. In 1966-1970 the increase in the level of women's employment in public production slowed down, and the reduction in the birthrate also slowed: in 1960-1966 the nation's birthrate dropped by 6.5 points, in the Ukraine it dropped 5.2 points, and in 1966-1970 it dropped one point in the USSR and 0.1 point in the Ukraine. If one compares the change in the level of women's labor activity and the level of the birthrate by ages, a definite dependence can be traced here: the highest degree of growth in the labor activity of women was for those over 30 years of age, and a higher rate of reduction in the birthrate is characteristic of this segment of the female population.<sup>6</sup>

It is essential to keep in mind the fact that the decision to limit the number of children in the family results not so much from the women's actual participation in public production as it does from the conditions which accompany that participation. While participating in public production, a woman carries out a large amount of work related to everyday life. The structure of women's non-production time differs significantly depending on the number of children in the family, especially with regard to time spent on housekeeping. Thus, in families with two children, the time

spent in this way is 2.6-fold greater than it is in families without children, and in families with three children it is 3.3-fold greater. The appearance of a family's first child leads to an average 76 percent increase in the amount of time spent on homemaking. With two children it increases by another 22 percent. In sum, women who are mothers spend approximately 3.4-fold more time on housework than do women who are single.<sup>7</sup> According to the results of a study conducted in the Latvian SSR, women in blue-collar positions with one child spend 11 hours per week more on housekeeping and child care than do women without children. And when there are two or more children in the family this difference increases to 13 hours.<sup>8</sup>

Women employed in blue-collar positions who have two or three children have significantly less free time than do women without children, and the structure of this time changes substantially. Women who have two children spent one-third as much time on studying and improving their job skills as do women without children. There is a direct relationship between the number of children in the family and the percentage of women students: for every 100 women of child-bearing age who do not have children, 30 are students, for every 100 who have one child 23 are students and for those with two or more children 12 are students.<sup>9</sup>

The lack of free time experienced by women who are mothers complicates for them the process of improving their skills and advancing in their jobs. They perform less skilled work at the production unit, receive lower wages and subsequently a lower old-age pension in comparison with women who have no children or just one. They have less job seniority and it is more frequently interrupted. According to data from the Scientific-Research Population Laboratory of Tashkent State University, a majority of 1,416 women who were studied and had four or more children did not have any specialized skills and were engaged in low-skilled or unskilled work: 30.9 percent of them had never worked regularly in public production.<sup>10</sup>

The relation between non-production and free time depends largely on the level of development which has been reached in the service sphere available to the public: that is, on how well public transport works for passengers, on how much time is spent buying food, on how often a woman uses the services of public catering enterprises, and domestic service enterprises, etc.

In the 10th Five-Year Plan the public service sphere received substantial development. Retail trade turnover increased 24 percent in the five-year period, while the volume of everyday services increased by 43 percent.<sup>11</sup> However, the services of public catering enterprises are still used by only an insignificant number of families; much time is spent on shopping for foodstuffs in retail outlets, and the public's needs for domestic services are not being fully satisfied. There are still not enough prepared mixtures of good nutritional value or intermediate food products for children, nor is there enough fashionable children's clothing. Children's food is not delivered to the home, nor is the washing of children's things and home delivery of them properly organized, etc.

"Basic Directions" includes high targets which have been set for the development of commerce, public catering, services (both domestic and municipal services) and other areas. For example, retail trade turnover in state and cooperative commerce will grow 22-25 percent in the five-year period, and the volume of everyday services realized will increase approximately 1.4-1.5-fold.<sup>12</sup> The accelerated development of the service sphere in the 11th Five-Year Plan will improve functionally the structure of both non-production as well as free time, and in this way will contribute to the reproductive activity of women and to the natural increase in population.

According to the results of many studies, housing conditions are named as among the factors which deter the birth of second and third children.<sup>13</sup>

In general the relationship between housing conditions and the birthrate has not yet been well studied. Nonetheless, on the basis of existing results, one can draw the conclusion that housing conditions influence demographic processes in a definite manner. During each five-year plan millions of people in our country receive new and more comfortable apartments.<sup>14</sup> In terms of the absolute number of apartments built, the USSR is first in the world. In the process of resolving the problem of complete housing provision, we are moving closer and closer to the achievement of the goal set by the party--the assignment of an individual apartment with modern conveniences to every family, including newly married couples.

At the present time, as the CPSU Central Committee Report to the 26th party congress noted, "... many families still live in uncomfortable communal apartments; many newly-wedded couples wait years for housing." Young families frequently live with parents or occupy living space below the public-health norms, at a time when their parents have excess space.

Redistribution of excess living space occupied by a segment of the population would contribute to an improvement in the living conditions of young families. Sometimes old people, who are entitled to 25-30 square meters of living space, remain in three- or four-room apartments. They are charged a supplementary rent for the excess space; however, it is not at present prompting people to return the excess living space to the state. It seems to us that an apartment rent which is 4- or 5-fold greater than the norm should be charged for the excess space.

Giving families with children top priority in the granting of apartments, establishing for these families priority in joining a housing cooperative, and distributing living space rationally with regard for the type of family--all these are measures which, in our opinion, should contribute to significant improvement in the living conditions of young families.

In the 11th Five-Year plan, as was noted in "Basic Directions," the following goal was set: "to improve consistently the living conditions of the Soviet people, to make housing more comfortable and more convenient; to expand the network of youth dormitories operated

enterprises and organizations, and to improve the services which they offer. To build residential buildings with a total area of 530-540 million square meters..."

The number of children's preschool facilities in our nation, as was already noted, is increasing from year to year. However, they do not yet fully satisfy the existing needs, and they are distributed unevenly. Some women spend a large amount of time traveling to the kindergarten or daycare facility. The poor material and equipment base of children's facilities, the extremely large number of children in groups, and the shortage of skilled personnel lower the quality of child care and the level of upbringing which they receive in preschool facilities. "Basic Directions" calls for "...the further development of the network and improvement in the operations of kindergartens and daycare facilities, schools (and groups) with extended day provisions, Pioneer camps and other children's facilities, especially in regions where women's employment in public production is at a high level."

In many cities of our country kindergartens and daycare centers have been organized on a voluntary basis, and child care groups have been organized under the umbrella of the Bureau of Voluntary Services. However, each city has its own approach to these organizations: equipment is acquired in different ways, meals for the children are organized differently, etc. Students, including those at teacher training institutes; pensioners and housewives are used as child care workers. The lack of coordination in the organization of kindergartens and daycare centers operated on a voluntary basis is hardly justified. A single position on the operation of voluntary children's facilities should be developed, and women's councils and women workers themselves should be brought into active participation in their organization. "Women workers themselves must show concern for the development of these (children's, I.M.) institutions," noted V.I. Lenin, "and this activity on the part of women will lead to a complete change in their old position..."<sup>15</sup>

The material and cultural level of family life are the most complex factor in terms of their influence on the birthrate. Research materials provide evidence that in certain socio-economic conditions a direct relationship exists between the material level and the birthrate, but under other conditions the opposite occurs.

Parents are responsible before society for the kind of people their children become, and for this reason they strive to create the best possible conditions for their mental and physical development. Demands for instruction and child development are raised, and family expenses for these purposes also grow. Families with children and those without them are in an unequal material position. As the number of children in the family increases, the level of material provision decreases. For this reason, young women explain their decision to limit the number of children by saying that they would not be able to create the necessary living conditions for their children (9 percent of the young women whom we questioned).



However, an inverse relationship between material level and the birthrate has also been established: the higher the income, the fewer the number of children in the family. As a rule, the women in these families have a high occupational, educational and cultural level, and they are striving constantly to improve their intellect, sometimes at the expense of a decision to have a second or third child.

A one-time and a monthly grant are paid to mothers in our country depending on the number of children in the family. Previously the one-time grants were made when a third child was born to a family. In the 11th Five-Year Plan, as stipulated by "Basic Directions" and a decree concerning measures to strengthen family assistance to those with children, the one-time state grants will be paid upon the birth of the first child (50 rubles) and at the birth of the second and third children (100 rubles).<sup>16</sup>

The family supplements or grants for children contribute and will contribute to improvement in the material level of life in the large family. However, they cannot be considered a universal motivating factor. In a number of cases the motivating influence of family supplements is insignificant. Everything depends on the size of the gap between the material and spiritual needs on the one hand, and the opportunities to satisfy them on the other. However, some demographers think that as our society advances along the path to communism, "the public consumption funds, rather than the family supplements, must become the basic form for the distribution of surplus product which goes to improve the material basis for the reproductive activity of the family."<sup>17</sup>

Even now the most important needs which arise during the raising of children (medical care, attendance at children's preschool institutions, and at schools and groups with an extended day program, at boarding schools; instruction in general education schools, tekhnikums, VUZ's, etc.) are satisfied through the public consumption funds. At the present time the amount received from the public funds depends on the number of children in the family, the number of students, pensioners, etc. In 1980 payments and benefits from these funds grew on average to 438 rubles per capita of the population, in contrast to 354 rubles in 1975. By the end of the 11th Five-Year Plan the public consumption funds will reach 138 billion rubles, which will amount to an average of approximately 2,000 rubles a year for a family of four.<sup>18</sup>

As our country advances toward communism, the gradual introduction (to be financed by the public consumption funds) of a no-fee policy at children's preschool institutions, boarding schools, sanatoria and Pioneer camps; free meals in schools, in extended-day programs, in general education schools; free medications for children up to 16 when treated at home; free use of all forms of public transportation for children and other measures will contribute to a significant improvement in the material position of large families and to an increase in the reproductive activity of women.

In the course of building a developed socialist society our country has accumulated significant experience in raising children in the family.

Nonetheless, the amount of attention devoted to the psychological, social-hygiene and economic preparation of young people for independent family life is inadequate. Research materials show that in the first years of family life young couples sometimes decide not to have children due to a lack of preparation for the performance of household duties and for the organization of family life. At the present time the secondary school spends almost no time of preparing school children for future family life, for the fulfillment of the extremely important social roles of husband and father, wife and mothers. The school should provide some knowledge of cooking, domestic economy and child care. And men, as well as women, should attend courses for young parents. The resolution of family education problems depends largely on television, radio, the movies and the press.

Thus, the demographic behavior of young families is formed under the influence of complex and at times contradictory socio-economic factors; in this development a number of difficulties are encountered, and they can be overcome through the comprehensive utilization of the entire arsenal of demographic policy measures. An important stage along this path consists of the fulfillment of the tasks set by the 26th CPSU Congress to improve the material and cultural level of the people's life and to conduct an effective demographic policy.

#### FOOTNOTES

1. See B.A. Belova, "An Investigation of Opinions Regarding the Best and Expected Number of Children in a Family," VESTNIK STATISTIKI, No 6, 1971, p 30.
2. See T.V. Ryabushkin and R.A. Galetskaya, "Dinamiki i struktura naseleniya v sotsialisticheskom obshchestve" /The Dynamics and Structure of the Population in Socialist Society/, Moscow, Statistika, 1979, pp 185, 187.
3. See "Molodaya sem'ya" /Young Family/, Series 18, Moscow, Statistika, 1977, pp 6-7.
4. G.A. Volkov, "On the Need to Influence the Birthrate" in the collection "Rozhdayemost'" /Birthrate/, Moscow, Statistika, 1976, p 41.
5. See "Narodnoye khozyastvo SSSR v 1980" /The USSR National Economy in 1980/, Moscow, Finansy i statistika, 1981, pp 361, 368.
6. See "Narodnoye khozyastvo SSSR v 1980," p 31; "Narodnoye gospodarstvo Ukrayins'koyu RSR u 1980 rotsi," Kiev, Tekhnika, 1981, p 19.
7. See "Upravleniye razvitiyem narodnaseleniya v SSSR" /Management of Population Development/, Statistika, 1977, p 114.
8. See "Sotsial'no-demograficheskiye issledovaniya sem'i v respublikakh Sovetskoy Pribaltiki" /Social-demographic Investigations of the Family in the Baltic Republics/, Riga, Znatiye, 1980, p 71.
9. See L.A. Gordon and E.V. Klopov "Chelovek posle raboty. Sotsial'nyye problemy byta i vnerabocheye vremya" /A Person After Work. Social Problems of Everyday life and Non-Work Time/, Moscow, Nauka, 1972, p 198.

10. See "Vosproizvodstvo naseleniya i trudovykh resursov" /Reproduction of the Population and Labor Resources/, Moscow, Nauka, 1976, p 112.
  11. See "Materialy XXVI s'yezda KPSS" /Materials of the 26th CPSU Congress/, Moscow, Politizdat, 1981, p 134.
  12. Ibid., pp 176, 180.
  13. See I.P. Katkova, "Demograficheskoye povedeniye molodykh semey. Sovetskaya sotsiologicheskaya assotsiatsiya" /The Demographic Behavior of Young Families/, Moscow, 1970, pp 4-5; "Problemy demografii" /Problems of Demography/, Moscow, Statistika, 1971, p 154.
  14. See "Materialy XXVI s'yezda KPSS, p 134.
  15. See V.I. Lenin "Poln. sobr. soch." /Complete Collected Works/, Vol 39, pp 202-203.
  16. See "Materialy XXVI s'yezda KPSS," p 105.
  17. V. S. Steshenko, "Demografiya v sovremenom mire" /Demography in the Present-Day World/, Moscow, Statistika, 1978, p 145.
  18. See "Materialy XXVI s'yezda KPSS," p 104.
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